United Nations S/RES/2231 (2015)

Security Council

Distr.: General
20 July 2015

Resolution 2231 (2015)

Adopted by the Security Council at its 7488th meeting, on 20 July 2015

The Security Council,

Recalling the Statement of its President, S/PRST/2006/15, and its resolutions 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), and 1929 (2010),

Reaffirming its commitment to the Treaty on the Non-Proliferation of Nuclear Weapons, the need for all States Party to that Treaty to comply fully with their obligations, and *recalling* the right of States Party, in conformity with Articles I and II of that Treaty, to develop research, production and use of nuclear energy for peaceful purposes without discrimination,

Emphasizing the importance of political and diplomatic efforts to find a negotiated solution guaranteeing that Iran's nuclear programme is exclusively for peaceful purposes, and *noting* that such a solution would benefit nuclear non-proliferation,

Welcoming diplomatic efforts by China, France, Germany, the Russian Federation, the United Kingdom, the United States, the High Representative of the European Union for Foreign Affairs and Security Policy, and Iran to reach a comprehensive, long-term and proper solution to the Iranian nuclear issue, culminating in the Joint Comprehensive Plan of Action (JCPOA) concluded on 14 July 2015, (S/2015/544, as attached as Annex A to this resolution) and the establishment of the Joint Commission,

Welcoming Iran's reaffirmation in the JCPOA that it will under no circumstances ever seek, develop or acquire any nuclear weapons,

Noting the statement of 14 July 2015, from China, France, Germany, the Russian Federation, the United Kingdom, the United States, and the European Union aimed at promoting transparency and creating an atmosphere conducive to the full implementation of the JCPOA (S/2015/545, as attached as Annex B to this resolution),

Affirming that conclusion of the JCPOA marks a fundamental shift in its consideration of this issue, and *expressing* its desire to build a new relationship with

Please recycle

Iran strengthened by the implementation of the JCPOA and to bring to a satisfactory conclusion its consideration of this matter,

Affirming that full implementation of the JCPOA will contribute to building confidence in the exclusively peaceful nature of Iran's nuclear programme,

Strongly supporting the essential and independent role of the International Atomic Energy Agency (IAEA) in verifying compliance with safeguards agreements, including the non-diversion of declared nuclear material to undeclared purposes and the absence of undeclared nuclear material and undeclared nuclear activities, and, in this context, in ensuring the exclusively peaceful nature of Iran's nuclear programme, including through the implementation of the "Framework for Cooperation" agreed between Iran and the IAEA on 11 November 2013 and the "Roadmap for Clarification of Past and Present Outstanding Issues", and *recognizing* the IAEA's important role in supporting full implementation of the JCPOA,

Affirming that IAEA safeguards are a fundamental component of nuclear non-proliferation, promote greater confidence among States, inter alia, by providing assurance that States are complying with their obligations under relevant safeguards agreements, contribute to strengthening their collective security and help to create an environment conducive to nuclear cooperation, and further *recognizing* that effective and efficient safeguards implementation requires a cooperative effort between the IAEA and States, that the IAEA Secretariat will continue to engage in open dialogue on safeguards matters with States to increase transparency and build confidence and to interact with them on the implementation of safeguards, and in this case, avoid hampering the economic and technological development of Iran or international cooperation in the field of peaceful nuclear activities; respect health, safety, physical protection and other security provisions in force and the rights of individuals; and take every precaution to protect commercial, technological and industrial secrets as well as other confidential information coming to its knowledge,

Encouraging Member States to cooperate, including through IAEA involvement, with Iran in the framework of the JCPOA in the field of peaceful uses of nuclear energy and to engage in mutually determined civil nuclear cooperation projects, in accordance with Annex III of the JCPOA,

Noting the termination of provisions of previous resolutions and other measures foreseen in this resolution, and *inviting* Member States to give due regard to these changes,

Emphasizing that the JCPOA is conducive to promoting and facilitating the development of normal economic and trade contacts and cooperation with Iran, and *having* regard to States' rights and obligations relating to international trade,

Underscoring that Member States are obligated under Article 25 of the Charter of the United Nations to accept and carry out the Security Council's decisions,

1. *Endorses* the JCPOA, and *urges* its full implementation on the timetable established in the JCPOA;

2. *Calls upon* all Members States, regional organizations and international organizations to take such actions as may be appropriate to support the implementation of the JCPOA, including by taking actions commensurate with the

implementation plan set out in the JCPOA and this resolution and by refraining from actions that undermine implementation of commitments under the JCPOA;

3. *Requests* the Director General of the IAEA to undertake the necessary verification and monitoring of Iran's nuclear-related commitments for the full duration of those commitments under the JCPOA, and *reaffirms* that Iran shall cooperate fully as the IAEA requests to be able to resolve all outstanding issues, as identified in IAEA reports;

4. *Requests* the Director General of the IAEA to provide regular updates to the IAEA Board of Governors and, as appropriate, in parallel to the Security Council on Iran's implementation of its commitments under the JCPOA and also to report to the IAEA Board of Governors and in parallel to the Security Council at any time if the Director General has reasonable grounds to believe there is an issue of concern directly affecting fulfilment of JCPOA commitments;

Terminations

5. *Requests* that, as soon as the IAEA has verified that Iran has taken the actions specified in paragraphs 15.1-15.11 of Annex V of the JCPOA, the Director General of the IAEA submit a report confirming this fact to the IAEA Board of Governors and in parallel to the Security Council;

6. *Requests* further that, as soon as the IAEA has reached the Broader Conclusion that all nuclear material in Iran remains in peaceful activities, the Director General of the IAEA submit a report confirming this conclusion to the IAEA Board of Governors and in parallel to the Security Council;

7. *Decides*, acting under Article 41 of the Charter of the United Nations, that, upon receipt by the Security Council of the report from the IAEA described in paragraph 5:

(a) The provisions of resolutions 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), 1929 (2010) and 2224 (2015) shall be terminated;

(b) All States shall comply with paragraphs 1, 2, 4, and 5 and the provisions in subparagraphs (a)-(f) of paragraph 6 of Annex B for the duration specified in each paragraph or subparagraph, and are called upon to comply with paragraphs 3 and 7 of Annex B;

8. *Decides*, acting under Article 41 of the Charter of the United Nations, that on the date ten years after the JCPOA Adoption Day, as defined in the JCPOA, all the provisions of this resolution shall be terminated, and none of the previous resolutions described in paragraph 7 (a) shall be applied, the Security Council will have concluded its consideration of the Iranian nuclear issue, and the item "Non-proliferation" will be removed from the list of matters of which the Council is seized;

9. *Decides*, acting under Article 41 of the Charter of the United Nations, that the terminations described in Annex B and paragraph 8 of this resolution shall not occur if the provisions of previous resolutions have been applied pursuant to paragraph 12;

Application of Provisions of Previous Resolutions

10. *Encourages* China, France, Germany, the Russian Federation, the United Kingdom, the United States, the European Union (EU), and Iran (the "JCPOA participants") to resolve any issues arising with respect to implementation of JCPOA commitments through the procedures specified in the JCPOA, and *expresses* its intention to address possible complaints by JCPOA participants about significant non-performance by another JCPOA participant;

11. *Decides*, acting under Article 41 of the Charter of the United Nations, that, within 30 days of receiving a notification by a JCPOA participant State of an issue that the JCPOA participant State believes constitutes significant non-performance of commitments under the JCPOA, it shall vote on a draft resolution to continue in effect the terminations in paragraph 7 (a) of this resolution, *decides* further that if, within 10 days of the notification referred to above, no Member of the Security Council has submitted such a draft resolution for a vote, then the President of the Security Council shall submit such a draft resolution and put it to a vote within 30 days of the notification referred to above, and *expresses* its intention to take into account the views of the States involved in the issue and any opinion on the issue by the Advisory Board established in the JCPOA;

12. *Decides*, acting under Article 41 of the Charter of the United Nations, that, if the Security Council does not adopt a resolution under paragraph 11 to continue in effect the terminations in paragraph 7 (a), then effective midnight Greenwich Mean Time after the thirtieth day after the notification to the Security Council described in paragraph 11, all of the provisions of resolutions 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), and 1929 (2010) that have been terminated pursuant to paragraph 7 (a) shall apply in the same manner as they applied before the adoption of this resolution, and the measures contained in paragraphs 7, 8 and 16 to 20 of this resolution shall be terminated, unless the Security Council decides otherwise;

13. *Underscores* that, in the event of a notification to the Security Council described in paragraph 11, Iran and the other JCPOA participants should strive to resolve the issue giving rise to the notification, *expresses* its intention to prevent the reapplication of the provisions if the issue giving rise to the notification is resolved, *decides*, acting under Article 41 of the Charter of the United Nations, that if the notifying JCPOA participant State informs the Security Council that such an issue has been resolved before the end of the 30-day period specified in paragraph 12 above, then the provisions of this resolution, including the terminations in paragraph 7 (a), shall remain in effect notwithstanding paragraph 12 above, and *notes* Iran's statement that if the provisions of previous resolutions are applied pursuant to paragraph 12 in whole or in part, Iran will treat this as grounds to cease performing its commitments under the JCPOA;

14. *Affirms* that the application of the provisions of previous resolutions pursuant to paragraph 12 do not apply with retroactive effect to contracts signed between any party and Iran or Iranian individuals and entities prior to the date of application, provided that the activities contemplated under and execution of such contracts are consistent with the JCPOA, this resolution and the previous resolutions;

15. *Affirms* that any application of the provisions of previous resolutions pursuant to paragraph 12 is not intended to harm individuals and entities that, prior to that application of those provisions, engaged in business with Iran or Iranian individuals and entities that is consistent with the JCPOA and this resolution, *encourages* Member States to consult with each other with regard to such harm, and to take action to mitigate such unintended harm for these individuals and entities, and *decides* if the provisions of previous resolutions are applied pursuant to paragraph 12 not to impose measures with retroactive effect on individuals and entities for business activities with Iran that were consistent with the JCPOA, this resolution and the previous resolutions prior to the application of these provisions;

JCPOA Implementation

16. *Decides*, acting under Article 41 of the Charter of the United Nations, to review recommendations of the Joint Commission regarding proposals by States to participate in or permit nuclear-related activities set forth in paragraph 2 of Annex B, and that such recommendations shall be deemed to be approved unless the Security Council adopts a resolution to reject a Joint Commission recommendation within five working days of receiving it;

17. *Requests* Member States seeking to participate in or permit activities set forth in paragraph 2 of Annex B to submit proposals to the Security Council, *expresses* its intention to share such proposals with the Joint Commission established in the JCPOA for its review, *invites* any Member of the Security Council to provide relevant information and opinions about these proposals, *encourages* the Joint Commission to give due consideration to any such information and opinions, and *requests* the Joint Commission to provide its recommendations on these proposals to the Security Council within twenty working days (or, if extended, within thirty working days);

18. *Requests* the Secretary-General, in order to support JCPOA implementation, to take the necessary administrative measures to facilitate communications with Member States and between the Security Council and the Joint Commission through agreed practical arrangements;

19. *Requests* the IAEA and the Joint Commission to consult and exchange information, where appropriate, as specified in the JCPOA, and *requests* further that the exporting states cooperate with the Joint Commission in accordance with Annex IV of the JCPOA;

20. *Requests* the Joint Commission to review proposals for transfers and activities described in paragraph 2 of Annex B with a view to recommending approval where consistent with this resolution and the provisions and objectives of the JCPOA so as to provide for the transfer of items, materials, equipment, goods and technology required for Iran's nuclear activities under the JCPOA, and *encourages* the Joint Commission to establish procedures to ensure detailed and thorough review of all such proposals;

Exemptions

21. *Decides*, acting under Article 41 of the Charter of the United Nations, that the measures imposed in resolutions 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), and 1929 (2010) shall not apply to the supply, sale, or

transfer of items, materials, equipment, goods and technology, and the provision of any related technical assistance, training, financial assistance, investment, brokering or other services, by JCPOA participant States or Member States acting in coordination with them, that is directly related to: (a) the modification of two cascades at the Fordow facility for stable isotope production; (b) the export of Iran's enriched uranium in excess of 300 kilograms in return for natural uranium; and (c) the modernization of the Arak reactor based on the agreed conceptual design and, subsequently, on the agreed final design of such reactor;

22. *Decides*, acting under Article 41 of the Charter of the United Nations, that Member States engaging in the activities permitted in paragraph 21 shall ensure that: (a) all such activities are undertaken strictly in accordance with the JCPOA; (b) they notify the Committee established pursuant to resolution 1737 (2006) and, when constituted, the Joint Commission ten days in advance of such activities; (c) the requirements, as appropriate, of the Guidelines as set out in the relevant INFCIRC referenced in resolution 1737 (2006), as updated, have been met; (d) they have obtained and are in a position to exercise effectively a right to verify the end-use and end-use location of any supplied item; and (e) in case of supplied items, materials, equipment, goods and technology listed in the INFCIRCs referenced in resolution 1737 (2006), as updated, they also notify the IAEA within ten days of the supply, sale or transfers;

23. *Decides*, acting under Article 41 of the Charter of the United Nations, also that the measures imposed in resolutions 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), and 1929 (2010) shall not apply to the extent necessary to carry out transfers and activities, as approved on a case-by-case basis in advance by the Committee established pursuant to resolution 1737 (2006), that are:

(a) directly related to implementation of the nuclear-related actions specified in paragraphs 15.1-15.11 of Annex V of the JCPOA;

(b) required for preparation for the implementation of the JCPOA; or,

(c) determined by the Committee to be consistent with the objectives of this resolution;

24. *Notes* that the provisions of paragraphs 21, 22, 23 and 27 continue in effect if the provisions of previous resolutions are applied pursuant to paragraph 12;

Other Matters

25. *Decides* to make the necessary practical arrangements to undertake directly tasks related to the implementation of this resolution, including those tasks specified in Annex B and the release of guidance;

26. *Urges* all States, relevant United Nations bodies and other interested parties, to cooperate fully with the Security Council in its exercise of the tasks related to this resolution, in particular by supplying any information at their disposal on the implementation of the measures in this resolution;

27. *Decides* that all provisions contained in the JCPOA are only for the purposes of its implementation between the E3/EU+3 and Iran and should not be considered as setting precedents for any other State or for principles of international law and the rights and obligations under the Treaty on the Non-Proliferation of

Nuclear Weapons and other relevant instruments, as well as for internationally recognized principles and practices;

28. *Recalls* that the measures imposed by paragraph 12 of resolution 1737 (2006) shall not prevent a designated person or entity from making payment due under a contract entered into prior to the listing of such a person or entity, provided that the conditions specified in paragraph 15 of that resolution are met, and *underscores*, that if the provisions of previous resolutions are reapplied pursuant to paragraph 12 of this resolution, then this provision will apply;

29. *Emphasizes* the importance of all States taking the necessary measures to ensure that no claim shall lie at the instance of the Government of Iran, or any person or entity in Iran, or of persons or entities designated pursuant to resolution 1737 (2006) and related resolutions, or any person claiming through or for the benefit of any such person or entity, in connection with any contract or other transaction where its performance was prevented by reason of the application of the provisions of resolutions 1737 (2006), 1747 (2007), 1803 (2008), 1929 (2010) and this resolution;

30. *Decides* to remain seized of the matter until the termination of the provisions of this resolution in accordance with paragraph 8.

Annex A: Joint Comprehensive Plan of Action (JCPOA), Vienna, 14 July 2015

PREFACE

The E3/EU+3 (China, France, Germany, the Russian Federation, the United Kingdom and the United States, with the High Representative of the European Union for Foreign Affairs and Security Policy) and the Islamic Republic of Iran welcome this historic Joint Comprehensive Plan of Action (JCPOA), which will ensure that Iran's nuclear programme will be exclusively peaceful, and mark a fundamental shift in their approach to this issue. They anticipate that full implementation of this JCPOA will positively contribute to regional and international peace and security. Iran reaffirms that under no circumstances will Iran ever seek, develop or acquire any nuclear weapons.

Iran envisions that this JCPOA will allow it to move forward with an exclusively peaceful, indigenous nuclear programme, in line with scientific and economic considerations, in accordance with the JCPOA, and with a view to building confidence and encouraging international cooperation. In this context, the initial mutually determined limitations described in this JCPOA will be followed by a gradual evolution, at a reasonable pace, of Iran's peaceful nuclear programme, including its enrichment activities, to a commercial programme for exclusively peaceful purposes, consistent with international non-proliferation norms.

The E3/EU+3 envision that the implementation of this JCPOA will progressively allow them to gain confidence in the exclusively peaceful nature of Iran's programme. The JCPOA reflects mutually determined parameters, consistent with practical needs, with agreed limits on the scope of Iran's nuclear programme, including enrichment activities and R&D. The JCPOA addresses the E3/EU+3's concerns, including through comprehensive measures providing for transparency and verification.

The JCPOA will produce the comprehensive lifting of all UN Security Council sanctions as well as multilateral and national sanctions related to Iran's nuclear programme, including steps on access in areas of trade, technology, finance, and energy.

PREAMBLE AND GENERAL PROVISIONS

i. The Islamic Republic of Iran and the E3/EU+3 (China, France, Germany, the Russian Federation, the United Kingdom and the United States, with the High Representative of the European Union for Foreign Affairs and Security Policy) have decided upon this long-term Joint Comprehensive Plan of Action (JCPOA). This JCPOA, reflecting a step-by-step approach, includes the reciprocal commitments as laid down in this document and the annexes hereto and is to be endorsed by the United Nations (UN) Security Council.

ii. The full implementation of this JCPOA will ensure the exclusively peaceful nature of Iran's nuclear programme.

iii. Iran reaffirms that under no circumstances will Iran ever seek, develop or acquire any nuclear weapons.

iv. Successful implementation of this JCPOA will enable Iran to fully enjoy its right to nuclear energy for peaceful purposes under the relevant articles of the nuclear Non-Proliferation Treaty (NPT) in line with its obligations therein, and the Iranian nuclear programme will be treated in the same manner as that of any other non-nuclear-weapon state party to the NPT.

v. This JCPOA will produce the comprehensive lifting of all UN Security Council sanctions as well as multilateral and national sanctions related to Iran's nuclear programme, including steps on access in areas of trade, technology, finance and energy.

vi. The E3/EU+3 and Iran reaffirm their commitment to the purposes and principles of the United Nations as set out in the UN Charter.

vii. The E3/EU+3 and Iran acknowledge that the NPT remains the cornerstone of the nuclear non-proliferation regime and the essential foundation for the pursuit of nuclear disarmament and for the peaceful uses of nuclear energy.

viii. The E3/EU+3 and Iran commit to implement this JCPOA in good faith and in a constructive atmosphere, based on mutual respect, and to refrain from any action inconsistent with the letter, spirit and intent of this JCPOA that would undermine its successful implementation. The E3/EU+3 will refrain from imposing discriminatory regulatory and procedural requirements in lieu of the sanctions and restrictive measures covered by this JCPOA. This JCPOA builds on the implementation of the Joint Plan of Action (JPOA) agreed in Geneva on 24 November 2013.

ix. A Joint Commission consisting of the E3/EU+3 and Iran will be established to monitor the implementation of this JCPOA and will carry out the functions provided for in this JCPOA. This Joint Commission will address issues arising from the implementation of this JCPOA and will operate in accordance with the provisions as detailed in the relevant annex.

x. The International Atomic Energy Agency (IAEA) will be requested to monitor and verify the voluntary nuclear-related measures as detailed in this JCPOA. The IAEA will be requested to provide regular updates to the Board of Governors, and as provided for in this JCPOA, to the UN Security Council. All relevant rules and regulations of the IAEA with regard to the protection of information will be fully observed by all parties involved.

xi. All provisions and measures contained in this JCPOA are only for the purpose of its implementation between E3/EU+3 and Iran and should not be considered as setting precedents for any other state or for fundamental principles of international law and the rights and obligations under the NPT and other relevant instruments, as well as for internationally recognised principles and practices.

xii. Technical details of the implementation of this JCPOA are dealt with in the annexes to this document.

xiii. The EU and E3+3 countries and Iran, in the framework of the JCPOA, will cooperate, as appropriate, in the field of peaceful uses of nuclear energy and engage in mutually determined civil nuclear cooperation projects as detailed in Annex III, including through IAEA involvement.

xiv. The E3+3 will submit a draft resolution to the UN Security Council endorsing this JCPOA affirming that conclusion of this JCPOA marks a fundamental shift in its consideration of this issue and expressing its desire to build a new relationship with Iran. This UN Security Council resolution will also provide for the termination on Implementation Day of provisions imposed under previous resolutions; establishment of specific restrictions; and conclusion of consideration of the Iran nuclear issue by the UN Security Council 10 years after the Adoption Day.

xv. The provisions stipulated in this JCPOA will be implemented for their respective durations as set forth below and detailed in the annexes.

xvi. The E3/EU+3 and Iran will meet at the ministerial level every 2 years, or earlier if needed, in order to review and assess progress and to adopt appropriate decisions by consensus.

Iran and E3/EU+3 will take the following voluntary measures within the timeframe as detailed in this JCPOA and its Annexes

NUCLEAR

A. ENRICHMENT, ENRICHMENT R&D, STOCKPILES

1. Iran's long term plan includes certain agreed limitations on all uranium enrichment and uranium enrichment-related activities including certain limitations on specific research and development (R&D) activities for the first 8 years, to be followed by gradual evolution, at a reasonable pace, to the next stage of its enrichment activities for exclusively peaceful purposes, as described in Annex I. Iran will abide by its voluntary commitments, as expressed in its own long-term enrichment and enrichment R&D plan to be submitted as part of the initial declaration for the Additional Protocol to Iran's Safeguards Agreement.

2. Iran will begin phasing out its IR-1 centrifuges in 10 years. During this period, Iran will keep its enrichment capacity at Natanz at up to a total installed uranium enrichment capacity of 5060 IR-1 centrifuges. Excess centrifuges and enrichment-related infrastructure at Natanz will be stored under IAEA continuous monitoring, as specified in Annex I.

3. Iran will continue to conduct enrichment R&D in a manner that does not accumulate enriched uranium. Iran's enrichment R&D with uranium for 10 years will only include IR-4, IR-5, IR-6 and IR-8 centrifuges as laid out in Annex I, and Iran will not engage in other isotope separation technologies for enrichment of uranium as specified in Annex I. Iran will continue testing IR-6 and IR-8 centrifuges, and will commence testing of up to 30 IR-6 and IR-8 centrifuges after eight and a half years, as detailed in Annex I.

4. As Iran will be phasing out its IR-1 centrifuges, it will not manufacture or assemble other centrifuges, except as provided for in Annex I, and will replace failed centrifuges with centrifuges of the same type. Iran will manufacture advanced centrifuge machines only for the purposes specified in this JCPOA. From the end of the eighth year, and as described in Annex I, Iran will start to manufacture agreed numbers of IR-6 and IR-8 centrifuge machines without rotors and will store all of the manufactured machines at Natanz, under IAEA continuous monitoring until they are needed under Iran's long-term enrichment and enrichment R&D plan.

5. Based on its own long-term plan, for 15 years, Iran will carry out its uranium enrichment-related activities, including safeguarded R&D exclusively in the Natanz Enrichment facility, keep its level of uranium enrichment at up to 3.67%, and, at Fordow, refrain from any uranium enrichment and uranium enrichment R&D and from keeping any nuclear material.

6. Iran will convert the Fordow facility into a nuclear, physics and technology centre. International collaboration including in the form of scientific joint partnerships will be established in agreed areas of research. 1044 IR-1 centrifuges in six cascades will remain in one wing at Fordow. Two of these cascades will spin without uranium and will be transitioned, including through appropriate infrastructure modification, for stable isotope production. The

other four cascades with all associated infrastructure will remain idle. All other centrifuges and enrichment-related infrastructure will be removed and stored under IAEA continuous monitoring as specified in Annex I.

7. During the 15 year period, and as Iran gradually moves to meet international qualification standards for nuclear fuel produced in Iran, it will keep its uranium stockpile under 300 kg of up to 3.67% enriched uranium hexafluoride (UF6) or the equivalent in other chemical forms. The excess quantities are to be sold based on international prices and delivered to the international buyer in return for natural uranium delivered to Iran, or are to be down-blended to natural uranium level. Enriched uranium in fabricated fuel assemblies from Russia or other sources for use in Iran's nuclear reactors will not be counted against the above stated 300 kg UF6 stockpile, if the criteria set out in Annex I are met with regard to other sources. The Joint Commission will support assistance to Iran, including through IAEA technical cooperation as appropriate, in meeting international qualification standards for nuclear fuel produced in Iran. All remaining uranium oxide enriched to between 5% and 20% will be fabricated into fuel for the Tehran Research Reactor (TRR). Any additional fuel needed for the TRR will be made available to Iran at international market prices.

B. ARAK, HEAVY WATER, REPROCESSING

8. Iran will redesign and rebuild a modernised heavy water research reactor in Arak, based on an agreed conceptual design, using fuel enriched up to 3.67 %, in a form of an international partnership which will certify the final design. The reactor will support peaceful nuclear research and radioisotope production for medical and industrial purposes. The redesigned and rebuilt Arak reactor will not produce weapons grade plutonium. Except for the first core load, all of the activities for redesigning and manufacturing of the fuel assemblies for the redesigned reactor will be carried out in Iran. All spent fuel from Arak will be shipped out of Iran for the lifetime of the reactor. This international partnership will include participating E3/EU+3 parties, Iran and such other countries as may be mutually determined. Iran will take the leadership role as the owner and as the project manager and the E3/EU+3 and Iran will, before Implementation Day, conclude an official document which would define the responsibilities assumed by the E3/EU+3 participants.

9. Iran plans to keep pace with the trend of international technological advancement in relying on light water for its future power and research reactors with enhanced international cooperation, including assurance of supply of necessary fuel.

10. There will be no additional heavy water reactors or accumulation of heavy water in Iran for 15 years. All excess heavy water will be made available for export to the international market.

11. Iran intends to ship out all spent fuel for all future and present power and research nuclear reactors, for further treatment or disposition as provided for in relevant contracts to be duly concluded with the recipient party.

12. For 15 years Iran will not, and does not intend to thereafter, engage in any spent fuel reprocessing or construction of a facility capable of spent fuel

reprocessing, or reprocessing R&D activities leading to a spent fuel reprocessing capability, with the sole exception of separation activities aimed exclusively at the production of medical and industrial radio-isotopes from irradiated enriched uranium targets.

C. TRANSPARENCY AND CONFIDENCE BUILDING MEASURES

13. Consistent with the respective roles of the President and Majlis (Parliament), Iran will provisionally apply the Additional Protocol to its Comprehensive Safeguards Agreement in accordance with Article 17(b) of the Additional Protocol, proceed with its ratification within the timeframe as detailed in Annex V and fully implement the modified Code 3.1 of the Subsidiary Arrangements to its Safeguards Agreement.

14. Iran will fully implement the "Roadmap for Clarification of Past and Present Outstanding Issues" agreed with the IAEA, containing arrangements to address past and present issues of concern relating to its nuclear programme as raised in the annex to the IAEA report of 8 November 2011 (GOV/2011/65). Full implementation of activities undertaken under the Roadmap by Iran will be completed by 15 October 2015, and subsequently the Director General will provide by 15 December 2015 the final assessment on the resolution of all past and present outstanding issues to the Board of Governors, and the E3+3, in their capacity as members of the Board of Governors, will submit a resolution to the Board of Governors for taking necessary action, with a view to closing the issue, without prejudice to the competence of the Board of Governors.

15. Iran will allow the IAEA to monitor the implementation of the voluntary measures for their respective durations, as well as to implement transparency measures, as set out in this JCPOA and its Annexes. These measures include: a long-term IAEA presence in Iran; IAEA monitoring of uranium ore concentrate produced by Iran from all uranium ore concentrate plants for 25 years; containment and surveillance of centrifuge rotors and bellows for 20 years; use of IAEA approved and certified modern technologies including on-line enrichment measurement and electronic seals; and a reliable mechanism to ensure speedy resolution of IAEA access concerns for 15 years, as defined in Annex I.

16. Iran will not engage in activities, including at the R&D level, that could contribute to the development of a nuclear explosive device, including uranium or plutonium metallurgy activities, as specified in Annex I.

17. Iran will cooperate and act in accordance with the procurement channel in this JCPOA, as detailed in Annex IV, endorsed by the UN Security Council resolution.

SANCTIONS

18. The UN Security Council resolution endorsing this JCPOA will terminate all provisions of previous UN Security Council resolutions on the Iranian nuclear issue - 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), 1929 (2010) and 2224 (2015) - simultaneously with the IAEA-verified implementation of agreed nuclear-related measures by Iran and will establish specific restrictions, as specified in Annex V.[1]

19. The EU will terminate all provisions of the EU Regulation, as subsequently amended, implementing all nuclear-related economic and financial sanctions, including related designations, simultaneously with the IAEA-verified implementation of agreed nuclear-related measures by Iran as specified in Annex V, which cover all sanctions and restrictive measures in the following areas, as described in Annex II:

    i. Transfers of funds between EU persons and entities, including financial institutions, and Iranian persons and entities, including financial institutions;

    ii. Banking activities, including the establishment of new correspondent banking relationships and the opening of new branches and subsidiaries of Iranian banks in the territories of EU Member States;

    iii. Provision of insurance and reinsurance;

    iv. Supply of specialised financial messaging services, including SWIFT, for persons and entities set out in Attachment 1 to Annex II, including the Central Bank of Iran and Iranian financial institutions;

    v. Financial support for trade with Iran (export credit, guarantees or insurance);

    vi. Commitments for grants, financial assistance and concessional loans to the Government of Iran;

    vii. Transactions in public or public-guaranteed bonds;

    viii. Import and transport of Iranian oil, petroleum products, gas and petrochemical products;

    ix. Export of key equipment or technology for the oil, gas and petrochemical sectors;

    x. Investment in the oil, gas and petrochemical sectors;

    xi. Export of key naval equipment and technology;

    xii. Design and construction of cargo vessels and oil tankers;

    xiii. Provision of flagging and classification services;

    xiv. Access to EU airports of Iranian cargo flights;

    xv. Export of gold, precious metals and diamonds;

    xvi. Delivery of Iranian banknotes and coinage;

[1] The provisions of this Resolution do not constitute provisions of this JCPOA.

xvii. Export of graphite, raw or semi-finished metals such as aluminum and steel, and export or software for integrating industrial processes;

xviii. Designation of persons, entities and bodies (asset freeze and visa ban) set out in Attachment 1 to Annex II; and

xix. Associated services for each of the categories above.

20. The EU will terminate all provisions of the EU Regulation implementing all EU proliferation-related sanctions, including related designations, 8 years after Adoption Day or when the IAEA has reached the Broader Conclusion that all nuclear material in Iran remains in peaceful activities, whichever is earlier.

21. The United States will cease the application, and will continue to do so, in accordance with this JCPOA of the sanctions specified in Annex II to take effect simultaneously with the IAEA-verified implementation of the agreed nuclear-related measures by Iran as specified in Annex V. Such sanctions cover the following areas as described in Annex II:

i. Financial and banking transactions with Iranian banks and financial institutions as specified in Annex II, including the Central Bank of Iran and specified individuals and entities identified as Government of Iran by the Office of Foreign Assets Control on the Specially Designated Nationals and Blocked Persons List (SDN List), as set out in Attachment 3 to Annex II (including the opening and maintenance of correspondent and payable through-accounts at non-U.S. financial institutions, investments, foreign exchange transactions and letters of credit);

ii. Transactions in Iranian Rial;

iii. Provision of U.S. banknotes to the Government of Iran;

iv. Bilateral trade limitations on Iranian revenues abroad, including limitations on their transfer;

v. Purchase, subscription to, or facilitation of the issuance of Iranian sovereign debt, including governmental bonds;

vi. Financial messaging services to the Central Bank of Iran and Iranian financial institutions set out in Attachment 3 to Annex II;

vii. Underwriting services, insurance, or reinsurance;

viii. Efforts to reduce Iran's crude oil sales;

ix. Investment, including participation in joint ventures, goods, services, information, technology and technical expertise and support for Iran's oil, gas and petrochemical sectors,

x. Purchase, acquisition, sale, transportation or marketing of petroleum, petrochemical products and natural gas from Iran;

xi. Export, sale or provision of refined petroleum products and petrochemical products to Iran;

xii. Transactions with Iran's energy sector;

xiii. Transactions with Iran's shipping and shipbuilding sectors and port operators;

xiv. Trade in gold and other precious metals;

xv. Trade with Iran in graphite, raw or semi-finished metals such as aluminum and steel, coal, and software for integrating industrial processes;

xvi. Sale, supply or transfer of goods and services used in connection with Iran's automotive sector;

xvii. Sanctions on associated services for each of the categories above;

xviii. Remove individuals and entities set out in Attachment 3 to Annex II from the SDN List, the Foreign Sanctions Evaders List, and/or the Non-SDN Iran Sanctions Act List; and

xix. Terminate Executive Orders 13574, 13590, 13622, and 13645, and Sections 5 – 7 and 15 of Executive Order 13628.

22. The United States will, as specified in Annex II and in accordance with Annex V, allow for the sale of commercial passenger aircraft and related parts and services to Iran; license non-U.S. persons that are owned or controlled by a U.S. person to engage in activities with Iran consistent with this JCPOA; and license the importation into the United States of Iranian-origin carpets and foodstuffs.

23. Eight years after Adoption Day or when the IAEA has reached the Broader Conclusion that all nuclear material in Iran remains in peaceful activities, whichever is earlier, the United States will seek such legislative action as may be appropriate to terminate, or modify to effectuate the termination of, the sanctions specified in Annex II on the acquisition of nuclear-related commodities and services for nuclear activities contemplated in this JCPOA, to be consistent with the U.S. approach to other non-nuclear-weapon states under the NPT.

24. The E3/EU and the United States specify in Annex II a full and complete list of all nuclear-related sanctions or restrictive measures and will lift them in accordance with Annex V. Annex II also specifies the effects of the lifting of sanctions beginning on "Implementation Day". If at any time following the Implementation Day, Iran believes that any other nuclear-related sanction or restrictive measure of the E3/EU+3 is preventing the full implementation of the sanctions lifting as specified in this JCPOA, the JCPOA participant in question will consult with Iran with a view to resolving the issue and, if they concur that lifting of this sanction or restrictive measure is appropriate, the JCPOA participant in question will take appropriate action. If they are not able to resolve the issue, Iran or any member of the E3/EU+3 may refer the issue to the Joint Commission.

25. If a law at the state or local level in the United States is preventing the implementation of the sanctions lifting as specified in this JCPOA, the United States will take appropriate steps, taking into account all available authorities, with a view to achieving such implementation. The United States will actively encourage officials at the state or local level to take into account the changes in the U.S. policy reflected in the lifting of sanctions under this JCPOA and to refrain from actions inconsistent with this change in policy.

26. The EU will refrain from re-introducing or re-imposing the sanctions that it has terminated implementing under this JCPOA, without prejudice to the dispute resolution process provided for under this JCPOA. There will be no new nuclear-related UN Security Council sanctions and no new EU nuclear-related sanctions or restrictive measures. The United States will make best efforts in good faith to sustain this JCPOA and to prevent interference with the realisation of the full benefit by Iran of the sanctions lifting specified in Annex II. The U.S. Administration, acting consistent with the respective roles of the President and the Congress, will refrain from re-introducing or re-imposing the sanctions specified in Annex II that it has ceased applying under this JCPOA, without prejudice to the dispute resolution process provided for under this JCPOA. The U.S. Administration, acting consistent with the respective roles of the President and the Congress, will refrain from imposing new nuclear-related sanctions. Iran has stated that it will treat such a re-introduction or re-imposition of the sanctions specified in Annex II, or such an imposition of new nuclear-related sanctions, as grounds to cease performing its commitments under this JCPOA in whole or in part.

27. The E3/EU+3 will take adequate administrative and regulatory measures to ensure clarity and effectiveness with respect to the lifting of sanctions under this JCPOA. The EU and its Member States as well as the United States will issue relevant guidelines and make publicly accessible statements on the details of sanctions or restrictive measures which have been lifted under this JCPOA. The EU and its Member States and the United States commit to consult with Iran regarding the content of such guidelines and statements, on a regular basis and whenever appropriate.

28. The E3/EU+3 and Iran commit to implement this JCPOA in good faith and in a constructive atmosphere, based on mutual respect, and to refrain from any action inconsistent with the letter, spirit and intent of this JCPOA that would undermine its successful implementation. Senior Government officials of the E3/EU+3 and Iran will make every effort to support the successful implementation of this JCPOA including in their public statements.[2] The E3/EU+3 will take all measures required to lift sanctions and will refrain from imposing exceptional or discriminatory regulatory and procedural requirements in lieu of the sanctions and restrictive measures covered by the JCPOA.

29. The EU and its Member States and the United States, consistent with their respective laws, will refrain from any policy specifically intended to directly and adversely affect the normalisation of trade and economic relations with Iran inconsistent with their commitments not to undermine the successful implementation of this JCPOA.

30. The E3/EU+3 will not apply sanctions or restrictive measures to persons or entities for engaging in activities covered by the lifting of sanctions provided for in this JCPOA, provided that such activities are otherwise consistent with E3/EU+3 laws and regulations in effect. Following the lifting of sanctions under this JCPOA as specified in Annex II, ongoing investigations on possible

[2] 'Government officials' for the U.S. means senior officials of the U.S. Administration.

infringements of such sanctions may be reviewed in accordance with applicable national laws.

31. Consistent with the timing specified in Annex V, the EU and its Member States will terminate the implementation of the measures applicable to designated entities and individuals, including the Central Bank of Iran and other Iranian banks and financial institutions, as detailed in Annex II and the attachments thereto. Consistent with the timing specified in Annex V, the United States will remove designation of certain entities and individuals on the Specially Designated Nationals and Blocked Persons List, and entities and individuals listed on the Foreign Sanctions Evaders List, as detailed in Annex II and the attachments thereto.

32. EU and E3+3 countries and international participants will engage in joint projects with Iran, including through IAEA technical cooperation projects, in the field of peaceful nuclear technology, including nuclear power plants, research reactors, fuel fabrication, agreed joint advanced R&D such as fusion, establishment of a state-of-the-art regional nuclear medical centre, personnel training, nuclear safety and security, and environmental protection, as detailed in Annex III. They will take necessary measures, as appropriate, for the implementation of these projects.

33. The E3/EU+3 and Iran will agree on steps to ensure Iran's access in areas of trade, technology, finance and energy. The EU will further explore possible areas for cooperation between the EU, its Member States and Iran, and in this context consider the use of available instruments such as export credits to facilitate trade, project financing and investment in Iran.

IMPLEMENTATION PLAN

34. Iran and the E3/EU+3 will implement their JCPOA commitments according to the sequence specified in Annex V. The milestones for implementation are as follows:

    i. Finalisation Day is the date on which negotiations of this JCPOA are concluded among the E3/EU+3 and Iran, to be followed promptly by submission of the resolution endorsing this JCPOA to the UN Security Council for adoption without delay.

    ii. Adoption Day is the date 90 days after the endorsement of this JCPOA by the UN Security Council, or such earlier date as may be determined by mutual consent of the JCPOA participants, at which time this JCPOA and the commitments in this JCPOA come into effect. Beginning on that date, JCPOA participants will make necessary arrangements and preparations for the implementation of their JCPOA commitments.

    iii. Implementation Day is the date on which, simultaneously with the IAEA report verifying implementation by Iran of the nuclear-related measures described in Sections 15.1. to 15.11 of Annex V, the EU and the United States take the actions described in Sections 16 and 17 of Annex V respectively and in accordance with the UN Security Council resolution, the actions described in Section 18 of Annex V occur at the UN level.

    iv. Transition Day is the date 8 years after Adoption Day or the date on which the Director General of the IAEA submits a report stating that the IAEA has reached the Broader Conclusion that all nuclear material in Iran remains in peaceful activities, whichever is earlier. On that date, the EU and the United States will take the actions described in Sections 20 and 21 of Annex V respectively and Iran will seek, consistent with the Constitutional roles of the President and Parliament, ratification of the Additional Protocol.

    v. UN Security Council resolution Termination Day is the date on which the UN Security Council resolution endorsing this JCPOA terminates according to its terms, which is to be 10 years from Adoption Day, provided that the provisions of previous resolutions have not been reinstated. On that date, the EU will take the actions described in Section 25 of Annex V.

35. The sequence and milestones set forth above and in Annex V are without prejudice to the duration of JCPOA commitments stated in this JCPOA.

DISPUTE RESOLUTION MECHANISM

36. If Iran believed that any or all of the E3/EU+3 were not meeting their commitments under this JCPOA, Iran could refer the issue to the Joint Commission for resolution; similarly, if any of the E3/EU+3 believed that Iran was not meeting its commitments under this JCPOA, any of the E3/EU+3 could do the same. The Joint Commission would have 15 days to resolve the issue, unless the time period was extended by consensus. After Joint Commission consideration, any participant could refer the issue to Ministers of Foreign Affairs, if it believed the compliance issue had not been resolved.

Ministers would have 15 days to resolve the issue, unless the time period was extended by consensus. After Joint Commission consideration – in parallel with (or in lieu of) review at the Ministerial level - either the complaining participant or the participant whose performance is in question could request that the issue be considered by an Advisory Board, which would consist of three members (one each appointed by the participants in the dispute and a third independent member). The Advisory Board should provide a non-binding opinion on the compliance issue within 15 days. If, after this 30-day process the issue is not resolved, the Joint Commission would consider the opinion of the Advisory Board for no more than 5 days in order to resolve the issue. If the issue still has not been resolved to the satisfaction of the complaining participant, and if the complaining participant deems the issue to constitute significant non-performance, then that participant could treat the unresolved issue as grounds to cease performing its commitments under this JCPOA in whole or in part and/or notify the UN Security Council that it believes the issue constitutes significant non-performance.

37. Upon receipt of the notification from the complaining participant, as described above, including a description of the good-faith efforts the participant made to exhaust the dispute resolution process specified in this JCPOA, the UN Security Council, in accordance with its procedures, shall vote on a resolution to continue the sanctions lifting. If the resolution described above has not been adopted within 30 days of the notification, then the provisions of the old UN Security Council resolutions would be re-imposed, unless the UN Security Council decides otherwise. In such event, these provisions would not apply with retroactive effect to contracts signed between any party and Iran or Iranian individuals and entities prior to the date of application, provided that the activities contemplated under and execution of such contracts are consistent with this JCPOA and the previous and current UN Security Council resolutions. The UN Security Council, expressing its intention to prevent the reapplication of the provisions if the issue giving rise to the notification is resolved within this period, intends to take into account the views of the States involved in the issue and any opinion on the issue of the Advisory Board. Iran has stated that if sanctions are reinstated in whole or in part, Iran will treat that as grounds to cease performing its commitments under this JCPOA in whole or in part.

JCPOA Annex I – Nuclear-related measures

A. GENERAL

1. The sequence of implementation of the commitments detailed in this Annex is specified in Annex V to the Joint Comprehensive Plan of Action (JCPOA). Unless otherwise specified, the durations of the commitments in this Annex are from Implementation Day.

B. ARAK HEAVY WATER RESEARCH REACTOR

2. Iran will modernise the Arak heavy water research reactor to support peaceful nuclear research and radioisotopes production for medical and industrial purposes. Iran will redesign and rebuild the reactor, based on the agreed conceptual design (as attached to this Annex) to support its peaceful nuclear research and production needs and purposes, including testing of fuel pins and assembly prototypes and structural materials. The design will be such as to minimise the production of plutonium and not to produce weapon-grade plutonium in normal operation. The power of the redesigned reactor will not exceed 20 MWth. The E3/EU+3 and Iran share the understanding that the parameters in the conceptual design are subject to possible and necessary adjustments in developing the final design while fully preserving the above-mentioned purposes and principles of modernisation.

3. Iran will not pursue construction at the existing unfinished reactor based on its original design and will remove the existing calandria and retain it in Iran. The calandria will be made inoperable by filling any openings in the calandria with concrete such that the IAEA can verify that it will not be usable for a future nuclear application. In redesigning and reconstructing of the modernized Arak heavy water research reactor, Iran will maximise the use of existing infrastructure already installed at the current Arak research reactor.

4. Iran will take the leadership role as the owner and as the project manager, and have responsibility for overall implementation of the Arak modernisation project, with E3/EU+3 participants assuming responsibilities regarding the modernisation of the Arak reactor as described in this Annex. A Working Group composed of E3/EU+3 participants will be established to facilitate the redesigning and rebuilding of the reactor. An international partnership composed of Iran and the Working Group would implement the Arak modernisation project. The Working Group could be enlarged to include other countries by consensus of the participants of the Working Group and Iran. E3/EU+3 participants and Iran will conclude an official document expressing their strong commitments to the Arak modernisation project in advance of Implementation Day which would provide an assured path forward to modernise the reactor and would define the responsibilities assumed by the E3/EU+3 participants, and subsequently contracts would be concluded. The participants of the Working Group will provide assistance needed by Iran for redesigning and rebuilding the reactor, consistent with their respective national laws, in such a manner as to enable the safe and timely construction and commissioning of the modernised reactor.

5. Iran and the Working Group will cooperate to develop the final design of the modernised reactor and the design of the subsidiary laboratories to be carried

out by Iran, and review conformity with international safety standards, such that the reactor can be licensed by the relevant Iranian regulatory authority for commissioning and operation. The final design of the modernised reactor and the design of the subsidiary laboratories will be submitted to the Joint Commission. The Joint Commission will aim to complete its review and endorsement within three months after the submission of the final design. If the Joint Commission does not complete its review and endorsement within three months, Iran could raise the issue through the dispute resolution mechanism envisaged by this JCPOA.

6. The IAEA will monitor the construction and report to the Working Group for confirmation that the construction of the modernised reactor is consistent with the approved final design.

7. As the project manager, Iran will take responsibility for the construction efforts. E3/EU+3 parties will, consistent with their national laws, take appropriate administrative, legal, technical, and regulatory measures to support co-operation.

E3/EU+3 parties will support the purchase by Iran, the transfer and supply of necessary materials, equipment, instrumentation and control systems and technologies required for the construction of the redesigned reactor, through the mechanism established by this JCPOA, as well as through exploration of relevant funding contributions.

8. E3/EU+3 parties will also support and facilitate the timely and safe construction of the modernized Arak reactor and its subsidiary laboratories, upon request by Iran, through IAEA technical cooperation if appropriate, including but not limited to technical and financial assistance, supply of required materials and equipment, state-of-the-art instrumentation and control systems and equipment and support for licensing and authorization.

9. The redesigned reactor will use up to 3.67 percent enriched uranium in the form of UO2 with a mass of approximately 350 kg of UO2 in a full core load, with a fuel design to be reviewed and approved by the Joint Commission. The international partnership with the participation of Iran will fabricate the initial fuel core load for the reactor outside Iran. The international partnership will cooperate with Iran, including through technical assistance, to fabricate, test and license fuel fabrication capabilities in Iran for subsequent fuel core reloads for future use with this reactor. Destructive and non-destructive testing of this fuel including Post-Irradiation-Examination (PIE) will take place in one of the participating countries outside of Iran and that country will work with Iran to license the subsequent fuel fabricated in Iran for the use in the redesigned reactor under IAEA monitoring.

10. Iran will not produce or test natural uranium pellets, fuel pins or fuel assemblies, which are specifically designed for the support of the originally designed Arak reactor, designated by the IAEA as IR-40. Iran will store under IAEA continuous monitoring all existing natural uranium pellets and IR-40 fuel assemblies until the modernised Arak reactor becomes operational, at which point these natural uranium pellets and IR-40 fuel assemblies will be converted to UNH, or exchanged with an equivalent quantity of natural uranium. Iran will make the necessary technical modifications to the natural

uranium fuel production process line that was intended to supply fuel for the IR-40 reactor design, such that it can be used for the fabrication of the fuel reloads for the modernised Arak reactor.

11. All spent fuel from the redesigned Arak reactor, regardless of its origin, for the lifetime of the reactor, will be shipped out of Iran to a mutually determined location in E3/EU+3 countries or third countries, for further treatment or disposition as provided for in relevant contracts to be concluded, consistent with national laws, with the recipient party, within one year from the unloading from the reactor or whenever deemed to be safe for transfer by the recipient country.

12. Iran will submit the DIQ of the redesigned reactor to the IAEA which will include information on the planned radio-isotope production and reactor operation programme. The reactor will be operated under IAEA monitoring.

13. Iran will operate the Fuel Manufacturing Plant only to produce fuel assemblies for light water reactors and reloads for the modernized Arak reactor.

C. HEAVY WATER PRODUCTION PLANT

14. All excess heavy water which is beyond Iran's needs for the modernised Arak research reactor, the Zero power heavy water reactor, quantities needed for medical research and production of deuterate solutions and chemical compounds including, where appropriate, contingency stocks, will be made available for export to the international market based on international prices and delivered to the international buyer for 15 years. Iran's needs, consistent with the parameters above, are estimated to be 130 metric tonnes of nuclear grade heavy water or its equivalent in different enrichments prior to commissioning of the modernised Arak research reactor, and 90 metric tonnes after the commissioning, including the amount contained in the reactor.

15. Iran will inform the IAEA about the inventory and the production of the HWPP and will allow the IAEA to monitor the quantities of the heavy water stocks and the amount of heavy water produced, including through IAEA visits, as requested, to the HWPP.

D. OTHER REACTORS

16. Consistent with its plan, Iran will keep pace with the trend of international technological advancement in relying only on light water for its future nuclear power and research reactors with enhanced international cooperation including assurances of supply of necessary fuel.

17. Iran intends to ship out all spent fuel for all future and present nuclear power and research reactors, for further treatment or disposition as provided for in relevant contracts to be concluded consistent with national laws with the recipient party.

E. SPENT FUEL REPROCESSING ACTIVITIES

18. For 15 years Iran will not, and does not intend to thereafter, engage in any spent fuel reprocessing or spent fuel reprocessing R&D activities. For the purpose of this annex, spent fuel includes all types of irradiated fuel.

19. For 15 years Iran will not, and does not intend to thereafter, reprocess spent fuel except for irradiated enriched uranium targets for production of radio-isotopes for medical and peaceful industrial purposes.

20. For 15 years Iran will not, and does not intend to thereafter, develop, acquire or build facilities capable of separation of plutonium, uranium or neptunium from spent fuel or from fertile targets, other than for production of radio-isotopes for medical and peaceful industrial purposes.

21. For 15 years, Iran will only develop, acquire, build, or operate hot cells (containing a cell or interconnected cells), shielded cells or shielded glove boxes with dimensions less than 6 cubic meters in volume compatible with the specifications set out in Annex I of the Additional Protocol. These will be co-located with the modernised Arak research reactor, the Tehran Research Reactor, and radio-medicine production complexes, and only capable of the separation and processing of industrial or medical isotopes and non-destructive PIE. The needed equipment will be acquired through the procurement mechanism established by this JCPOA. For 15 years, Iran will develop, acquire, build, or operate hot cells (containing a cell or interconnected cells), shielded cells or shielded glove boxes with dimensions beyond 6 cubic meters in volume and specifications set out in Annex I of the Additional Protocol, only after approval by the Joint Commission.

22. The E3/EU+3 are ready to facilitate all of the destructive and non-destructive examinations on fuel elements and/or fuel assembly prototypes including PIE for all fuel fabricated in or outside Iran and irradiated in Iran, using their existing facilities outside Iran. Except for the Arak research reactor complex, Iran will not develop, build, acquire or operate hot cells capable of performing PIE or seek to acquire equipment to build/develop such a capability, for 15 years.

23. For 15 years, in addition to continuing current fuel testing activities at the TRR, Iran will undertake non-destructive post irradiation examination (PIE) of fuel pins, fuel assembly prototypes and structural materials. These examinations will be exclusively at the Arak research reactor complex. However, the E3/EU+3 will make available their facilities to conduct destructive testing with Iranian specialists, as agreed. The hot cells at the Arak research reactor in which non-destructive PIE are performed will not be physically interconnected to cells that process or handle materials for the production of medical or industrial radioisotopes.

24. For 15 years, Iran will not engage in producing or acquiring plutonium or uranium metals or their alloys, or conducting R&D on plutonium or uranium (or their alloys) metallurgy, or casting, forming, or machining plutonium or uranium metal.

25. Iran will not produce, seek, or acquire separated plutonium, highly enriched uranium (defined as 20% or greater uranium-235), or uranium-233, or neptunium-237 (except for use as laboratory standards or in instruments using neptunium-237) for 15 years.

26. If Iran seeks to initiate R&D on uranium metal based TRR fuel in small agreed quantities after 10 years and before 15 years, Iran will present its plan to, and seek approval by, the Joint Commission.

F. ENRICHMENT CAPACITY

27. Iran will keep its enrichment capacity at no more than 5060 IR-1 centrifuge machines in no more than 30 cascades in their current configurations in currently operating units at the Natanz Fuel Enrichment Plant (FEP) for 10 years.

28. Iran will keep its level of uranium enrichment at up to 3.67 percent for 15 years.

29. Iran will remove the following excess centrifuges and infrastructure not associated with 5060 IR-1 centrifuges in FEP, which will be stored at Natanz in Hall B of FEP under IAEA continuous monitoring:

29.1. All excess centrifuge machines, including IR-2m centrifuges. Excess IR-1 centrifuges will be used for the replacement of failed or damaged centrifuges of the same type on a one-for-one basis.

29.2. UF6 pipework including sub headers, valves and pressure transducers at cascade level, and frequency inverters, and UF6 withdrawal equipment from one of the withdrawal stations, which is currently not in service, including its vacuum pumps and chemical traps.

30. For the purpose of this Annex, the IAEA will confirm through the established practice the failed or damaged status of centrifuge machines before removal.

31. For 15 years, Iran will install gas centrifuge machines, or enrichment-related infrastructure, whether suitable for uranium enrichment, research and development, or stable isotope enrichment, exclusively at the locations and for the activities specified under this JCPOA.

G. CENTRIFUGES RESEARCH AND DEVELOPMENT

32. Iran will continue to conduct enrichment R&D in a manner that does not accumulate enriched uranium. For 10 years and consistent with its enrichment R&D plan, Iran's enrichment R&D with uranium will only include IR-4, IR-5, IR-6 and IR-8 centrifuges. Mechanical testing on up to two single centrifuges for each type will be carried out only on the IR-2m, IR-4, IR-5, IR-6, IR-6s, IR-7 and IR-8. Iran will build or test, with or without uranium, only those gas centrifuges specified in this JCPOA.

33. Consistent with its plan, Iran will continue working with the 164-machine IR-2m cascade at PFEP in order to complete the necessary tests until 30 November 2015 or the day of implementation of this JCPOA, whichever comes later, and after that it will take these machines out of the PFEP and store them under IAEA continuous monitoring at Natanz in Hall B of FEP.

34. Consistent with its plan, Iran will continue working with the 164-machine IR-4 cascade at PFEP in order to complete the necessary tests until 30 November 2015 or the day of implementation of this JCPOA, whichever comes later, and after that it will take these machines out of the PFEP and store them under IAEA continuous monitoring at Natanz in Hall B of FEP.

35. Iran will continue the testing of a single IR-4 centrifuge machine and IR-4 centrifuge cascade of up to 10 centrifuge machines for 10 years.

36. Iran will test a single IR-5 centrifuge machine for 10 years.

37. Iran will continue testing of the IR-6 on single centrifuge machines and its intermediate cascades and will commence testing of up to 30 centrifuge machines from one and a half years before the end of year 10. Iran will proceed from single centrifuge machines and small cascades to intermediate cascades in a logical sequence.

38. Iran will commence, upon start of implementation of the JCPOA, testing of the IR-8 on single centrifuge machines and its intermediate cascades and will commence the testing of up to 30 centrifuges machines from one and a half years before the end of year 10. Iran will proceed from single centrifuges to small cascades to intermediate cascades in a logical sequence.

39. For 10 years, Iran, consistent with the established practice, will recombine the enriched and depleted streams from the IR-6 and IR-8 cascades through the use of welded pipework on withdrawal main headers in a manner that precludes the withdrawal of enriched and depleted uranium materials and verified by the IAEA.

40. For 15 years, Iran will conduct all testing of centrifuges with uranium only at the PFEP. Iran will conduct all mechanical testing of centrifuges only at the PFEP and the Tehran Research Centre.

41. For the purpose of adapting PFEP to the R&D activities in the enrichment and enrichment R&D plan, Iran will remove all centrifuges except those needed for testing as described in the relevant paragraphs above, except for the IR-1 cascade (No. 1) as described below. For the full IR-1 cascade (No. 6), Iran will modify associated infrastructure by removing UF6 pipework, including sub-headers, valves and pressure transducers at cascade level, and frequency inverters. The IR-1 cascade (No. 1) centrifuges will be kept but made inoperable, as verified by the IAEA, through the removal of centrifuge rotors and the injection of epoxy resin into the sub headers, feeding, product, and tails pipework, and the removal of controls and electrical systems for vacuum, power and cooling. Excess centrifuges and infrastructure will be stored at Natanz in Hall B of FEP under IAEA continuous monitoring. The R&D space in line No. 6 will be left empty until Iran needs to use it for its R&D programme.

42. Consistent with the activities in the enrichment and enrichment R&D plan, Iran will maintain the cascade infrastructure for testing of single centrifuges and small and intermediate cascades in two R&D lines (No. 2 and No. 3) and will adapt two other lines (No. 4 and No. 5) with infrastructure similar to that for lines No. 2 and No. 3 in order to enable future R&D activities as specified in this JCPoA. Adaptation will include modification of all UF6 pipework (including removal of all sub headers except as agreed as needed for the R&D programme) and associated instrumentation to be compatible with single centrifuges and small and intermediate cascade testing instead of full scale testing.

43. Consistent with its plan and internationally established practices, Iran intends to continue R&D on new types of centrifuges through computer modelling and simulations, including at universities. For any such project to proceed to a

prototype stage for mechanical testing within 10 years, a full presentation to, and approval by, the Joint Commission is needed.

H. FORDOW FUEL ENRICHMENT PLANT

44. The Fordow Fuel Enrichment Plant (FFEP) will be converted into a nuclear, physics, and technology centre and international collaboration will be encouraged in agreed areas of research. The Joint Commission will be informed in advance of the specific projects that will be undertaken at Fordow.

45. Iran will not conduct any uranium enrichment or any uranium enrichment related R&D and will have no nuclear material at the Fordow Fuel Enrichment Plant (FFEP) for 15 years.

46. For 15 years, Iran will maintain no more than 1044 IR-1 centrifuge machines at one wing of the FFEP of which:

46.1. Two cascades that have not experienced UF6 before will be modified for the production of stable isotopes. The transition to stable isotope production of these cascades at FFEP will be conducted in joint partnership between the Russian Federation and Iran on the basis of arrangements to be mutually agreed upon. To prepare these two cascades for installation of a new cascade architecture appropriate for stable isotope production by the joint partnership, Iran will remove the connection to the UF6 feed main header, and move cascade UF6 pipework (except for the dump line in order to maintain vacuum) to storage in Fordow under IAEA continuous monitoring. The Joint Commission will be informed about the conceptual framework of stable isotope production at FFEP.

46.2. For four cascades with all associated infrastructure remaining except for pipework that enables crossover tandem connections, two will be placed in an idle state, not spinning. The other two cascades will continue to spin until the transition to stable isotope production described in the previous subparagraph has been completed. Upon completion of the transition to stable isotope production described in the previous subparagraph, these two spinning cascades will be placed in an idle state, not spinning.

47. Iran will:

47.1. remove the other 2 cascades of IR-1 centrifuges from this wing, by removing all centrifuges and cascade UF6 pipework, including sub-headers, valves and pressure transducers at cascade level, and frequency inverters.

47.2. also subsequently remove cascade electrical cabling, individual cascade control cabinets and vacuum pumps. All these excess centrifuges and infrastructure will be stored at Natanz in Hall B of FEP under IAEA continuous monitoring.

48. Iran will:

48.1. remove all excess centrifuges and uranium enrichment related infrastructure from the other wing of the FFEP. This will include removal

of all centrifuges and UF6 pipework, including sub headers, valves and pressure gauges and transducers, and frequency inverters and converters, and UF6 feed and withdrawal stations.

48.2. also subsequently remove cascade electrical cabling, individual cascade control cabinets, vacuum pumps and centrifuge mounting blocks. All these excess centrifuges and infrastructure will be stored at Natanz in Hall B of FEP under IAEA continuous monitoring.

49. Centrifuges from the four idle cascades may be used for the replacement of failed or damaged centrifuges in stable isotope production at Fordow.

50. Iran will limit its stable isotope production activities with gas centrifuges to the FFEP for 15 years and will use no more than 348 IR-1 centrifuges for these activities at the FFEP. The associated R&D activities in Iran will occur at the FFEP and at Iran's declared and monitored centrifuge manufacturing facilities for testing, modification and balancing these IR-1 centrifuges.

51. The IAEA will establish a baseline for the amount of uranium legacy from past enrichment operations that will remain in Fordow. Iran will permit the IAEA regular access, including daily as requested by the IAEA, access to the FFEP in order to monitor Iran's production of stable isotopes and the absence of undeclared nuclear material and activities at the FFEP for 15 years.

I. OTHER ASPECTS OF ENRICHMENT

52. Iran will abide by its voluntary commitments as expressed in its own long term enrichment and enrichment R&D plan to be submitted as part of the initial declaration described in Article 2 of the Additional Protocol.[1] The IAEA will confirm on an annual basis, for the duration of the plan that the nature and scope and scale of Iran's enrichment and enrichment R&D activities are in line with this plan.

53. iran will start to install necessary infrastructure for the IR-8 at Natanz in Hall B of FEP after year 10.

54. An agreed template for describing different centrifuge types (IR-1, IR-2m, IR-4, IR-5, IR-6, IR-6s, IR-7, IR-8) and the associated definitions need to be accomplished by implementation day.

55. An agreed procedure for measuring IR-1, IR-2m and IR-4 centrifuge performance data needs to be accomplished by implementation day.

J. URANIUM STOCKS AND FUELS

56. Iran will maintain a total enriched uranium stockpile of no more than 300 kg of up to 3.67% enriched uranium hexafluoride (or the equivalent in different chemical forms) for 15 years.

57. All enriched uranium hexafluoride in excess of 300 kg of up to 3.67% enriched UF6 (or the equivalent in different chemical forms) will be down blended to natural uranium level or be sold on the international market and delivered to the international buyer in return for natural uranium delivered to

[1] Iran will permit the IAEA to share the content of the enrichment and enrichment R&D plan, as submitted as part of the initial declaration, with the Joint Commission participants.

Iran. Iran will enter into a commercial contract with an entity outside Iran for the purchase and transfer of its enriched uranium stockpile in excess of 300 kg UF6 in return for natural uranium delivered to Iran. The E3/EU+3 will facilitate, where applicable, the conclusion and implementation of this contract. Iran may choose to seek to sell excess enriched uranium to the IAEA fuel bank in Kazakhstan when the fuel bank becomes operational.

58. All uranium oxide enriched to between 5% and 20% will be fabricated into fuel plates for the Tehran Research Reactor or transferred, based on a commercial transaction, outside of Iran or diluted to an enrichment level of 3.67% or less. Scrap oxide and other forms not in plates that cannot be fabricated into TRR fuel plates will be transferred, based on a commercial transaction, outside of Iran or diluted to an enrichment level of 3.67% or less. In case of future supply of 19.75% enriched uranium oxide (U3O8) for TRR fuel plates fabrication, all scrap oxide and other forms not in plates that cannot be fabricated into TRR fuel plates, containing uranium enriched to between 5% and 20%, will be transferred, based on a commercial transaction, outside of Iran or diluted to an enrichment level of 3.67% or less within 6 months of its production. Scrap plates will be transferred, based on a commercial transaction, outside Iran. The commercial transactions should be structured to return an equivalent amount of natural uranium to Iran. For 15 years, Iran will not build or operate facilities for converting fuel plates or scrap back to UF6.

59. Russian designed, fabricated and licensed fuel assemblies for use in Russian-supplied reactors in Iran do not count against the 300 kg UF6 stockpile limit. Enriched uranium in fabricated fuel assemblies from other sources outside of Iran for use in Iran's nuclear research and power reactors, including those which will be fabricated outside of Iran for the initial fuel load of the modernised Arak research reactor, which are certified by the fuel supplier and the appropriate Iranian authority to meet international standards, will not count against the 300 kg UF6 stockpile limit. The Joint Commission will establish a Technical Working Group with the goal of enabling fuel to be fabricated in Iran while adhering to the agreed stockpile parameters (300 kg of up to 3.67 % enriched UF6 or the equivalent in different chemical forms). This Technical Working Group will also, within one year, work to develop objective technical criteria for assessing whether fabricated fuel and its intermediate products can be readily converted to UF6. Enriched uranium in fabricated fuel assemblies and its intermediate products manufactured in Iran and certified to meet international standards, including those for the modernised Arak research reactor, will not count against the 300 kg UF6 stockpile limit provided the Technical Working Group of the Joint Commission approves that such fuel assemblies and their intermediate products cannot be readily reconverted into UF6. This could for instance be achieved through impurities (e.g. burnable poisons or otherwise) contained in fuels or through the fuel being in a chemical form such that direct conversion back to UF6 would be technically difficult without dissolution and purification. The objective technical criteria will guide the approval process of the Technical Working Group. The IAEA will monitor the fuel fabrication process for any fuel produced in Iran to verify that the fuel and intermediate products comport with the fuel fabrication process that was approved by the Technical Working Group. The Joint Commission will also support assistance to Iran including through IAEA

technical cooperation as appropriate, in meeting international qualification standards for nuclear fuel produced by Iran.

60. Iran will seek to enter into a commercial contract with entities outside Iran for the purchase of fuel for the TRR and enriched uranium targets. The E3/EU+3 will facilitate, as needed, the conclusion and implementation of this contract. In the case of lack of conclusion of a contract with a fuel supplier, E3/EU+3 will supply a quantity of 19.75% enriched uranium oxide (U3O8) and deliver to Iran, exclusively for the purpose of fabrication in Iran of fuel for the TRR and enriched uranium targets for the lifetime of the reactor. This 19.75% enriched uranium oxide (U3O8) will be supplied in increments no greater than approximately 5 kg and each new increment will be provided only when the previous increment of this material has been verified by the IAEA to have been mixed with aluminum to make fuel for the TRR or fabricated into enriched uranium targets. Iran will notify the E3/EU+3 within 2 year before the contingency of TRR fuel will be exhausted in order to have the uranium oxide available 6 months before the end of the 2 year period.

K. CENTRIFUGE MANUFACTURING

61. Consistent with its enrichment and enrichment R&D plan, Iran will only engage in production of centrifuges, including centrifuge rotors suitable for isotope separation or any other centrifuge components, to meet the enrichment and enrichment R&D requirements of this Annex.

62. Consistent with its plan, Iran will use the stock of IR-1 centrifuge machines in storage, which are in excess of the remaining 5060 IR-1 centrifuges in Natanz and the IR-1 centrifuges installed at Fordow, for the replacement of failed or damaged machines. Whenever during the 10 year period from the start of the implementation of the JCPOA, the level of stock of IR-1 machines falls to 500 or below, Iran may maintain this level of stock by resuming production of IR-1 machines at a rate up to the average monthly crash rate without exceeding the stock of 500.

63. Consistent with its plan, at the end of year 8, Iran will commence manufacturing of IR-6 and IR-8 centrifuges without rotors through year 10 at a rate of up to 200 centrifuges per year for each type. After year 10, Iran will produce complete centrifuges with the same rate to meet its enrichment and enrichment R&D needs. Iran will store them at Natanz in an above ground location, under IAEA continuous monitoring, until they are needed for final assembly according to the enrichment and enrichment R&D plan.

L. ADDITIONAL PROTOCOL AND MODIFIED CODE 3.1

64. Iran will notify the IAEA of provisional application of the Additional Protocol to its Safeguards Agreement in accordance with Article 17(b) of the Additional Protocol pending its entry into force, and subsequently seek ratification and entry into force, consistent with the respective roles of the President and the Majlis (Parliament).

65. Iran will notify the IAEA that it will fully implement the Modified Code 3.1 of the Subsidiary Arrangement to Iran's Safeguards Agreement as long as the Safeguards Agreement remains in force.

M. PAST AND PRESENT ISSUES OF CONCERN

66. Iran will complete all activities as set out in paragraphs 2, 4, 5, and 6 of the "Roadmap for Clarification of Past and Present Outstanding Issues", as verified by the IAEA in its regular updates by the Director General of the IAEA on the implementation of this Roadmap.

N. MODERN TECHNOLOGIES AND LONG TERM PRESENCE OF IAEA

67. For the purpose of increasing the efficiency of monitoring for this JCPOA, for 15 years or longer, for the specified verification measures:

67.1. Iran will permit the IAEA the use of on-line enrichment measurement and electronic seals which communicate their status within nuclear sites to IAEA inspectors, as well as other IAEA approved and certified modern technologies in line with internationally accepted IAEA practice. Iran will facilitate automated collection of IAEA measurement recordings registered by installed measurement devices and sending to IAEA working space in individual nuclear sites.

67.2. Iran will make the necessary arrangements to allow for a long-term IAEA presence, including issuing long-term visas, as well as providing proper working space at nuclear sites and, with best efforts, at locations near nuclear sites in Iran for the designated IAEA inspectors for working and keeping necessary equipment.

67.3. Iran will increase the number of designated IAEA inspectors to the range of 130-150 within 9 months from the date of the implementation of the JCPOA, and will generally allow the designation of inspectors from nations that have diplomatic relations with Iran, consistent with its laws and regulations.

O. TRANSPARENCY RELATED TO URANIUM ORE CONCENTRATE (UOC)

68. Iran will permit the IAEA to monitor, through agreed measures that will include containment and surveillance measures, for 25 years, that all uranium ore concentrate produced in Iran or obtained from any other source, is transferred to the uranium conversion facility (UCF) in Esfahan or to any other future uranium conversion facility which Iran might decide to build in Iran within this period.

69. Iran will provide the IAEA with all necessary information such that the IAEA will be able to verify the production of the uranium ore concentrate and the inventory of uranium ore concentrate produced in Iran or obtained from any other source for 25 years.

P. TRANSPARENCY RELATED TO ENRICHMENT

70. For 15 years, Iran will permit the IAEA to implement continuous monitoring, including through containment and surveillance measures, as necessary, to verify that stored centrifuges and infrastructure remain in storage, and are only used to replace failed or damaged centrifuges, as specified in this Annex.

71. Iran will permit the IAEA regular access, including daily access as requested by the IAEA, to relevant buildings at Natanz, including all parts of the FEP and PFEP, for 15 years.

72. For 15 years, the Natanz enrichment site will be the sole location for all of Iran's uranium enrichment related activities including safeguarded R&D.

73. Iran intends to apply nuclear export policies and practices in line with the internationally established standards for the export of nuclear material, equipment and technology. For 15 years, Iran will only engage, including through export of any enrichment or enrichment related equipment and technology, with any other country, or with any foreign entity in enrichment or enrichment related activities, including related research and development activities, following approval by the Joint Commission.

Q. ACCESS

74. Requests for access pursuant to provisions of this JCPOA will be made in good faith, with due observance of the sovereign rights of Iran, and kept to the minimum necessary to effectively implement the verification responsibilities under this JCPOA. In line with normal international safeguards practice, such requests will not be aimed at interfering with Iranian military or other national security activities, but will be exclusively for resolving concerns regarding fulfilment of the JCPOA commitments and Iran's other non-proliferation and safeguards obligations. The following procedures are for the purpose of JCPOA implementation between the E3/EU+3 and Iran and are without prejudice to the safeguards agreement and the Additional Protocol thereto. In implementing this procedure as well as other transparency measures, the IAEA will be requested to take every precaution to protect commercial, technological and industrial secrets as well as other confidential information coming to its knowledge.

75. In furtherance of implementation of the JCPOA, if the IAEA has concerns regarding undeclared nuclear materials or activities, or activities inconsistent with the JCPOA, at locations that have not been declared under the comprehensive safeguards agreement or Additional Protocol, the IAEA will provide Iran the basis for such concerns and request clarification.

76. If Iran's explanations do not resolve the IAEA's concerns, the Agency may request access to such locations for the sole reason to verify the absence of undeclared nuclear materials and activities or activities inconsistent with the JCPOA at such locations. The IAEA will provide Iran the reasons for access in writing and will make available relevant information.

77. Iran may propose to the IAEA alternative means of resolving the IAEA's concerns that enable the IAEA to verify the absence of undeclared nuclear materials and activities or activities inconsistent with the JCPOA at the location in question, which should be given due and prompt consideration.

78. If the absence of undeclared nuclear materials and activities or activities inconsistent with the JCPOA cannot be verified after the implementation of the alternative arrangements agreed by Iran and the IAEA, or if the two sides are unable to reach satisfactory arrangements to verify the absence of undeclared nuclear materials and activities or activities inconsistent with the JCPOA at the

specified locations within 14 days of the IAEA's original request for access, Iran, in consultation with the members of the Joint Commission, would resolve the IAEA's concerns through necessary means agreed between Iran and the IAEA. In the absence of an agreement, the members of the Joint Commission, by consensus or by a vote of 5 or more of its 8 members, would advise on the necessary means to resolve the IAEA's concerns. The process of consultation with, and any action by, the members of the Joint Commission would not exceed 7 days, and Iran would implement the necessary means within 3 additional days.

R. CENTRIFUGE COMPONENT MANUFACTURING TRANSPARENCY

79. Iran and the IAEA will take the necessary steps for containment and surveillance on centrifuge rotor tubes and bellows for 20 years.

80. In this context:

80.1. Iran will provide the IAEA with an initial inventory of all existing centrifuge rotor tubes and bellows and subsequent reports on changes in such inventory and will permit the IAEA to verify the inventory by item counting and numbering, and through containment and surveillance, of all rotor tubes and bellows, including in all existing and newly produced centrifuges.

80.2. Iran will declare all locations and equipment, namely flow-forming machines, filament-winding machines and mandrels that are used for production of centrifuge rotor tubes or bellows, and will permit the IAEA to implement continuous monitoring, including through containment and surveillance on this equipment, to verify that this equipment is being used to manufacture centrifuges only for the activities specified in this JCPOA.

S. OTHER URANIUM ISOTOPE SEPARATION ACTIVITIES

81. For 10 years, Iran's uranium isotope separation-related research and development or production activities will be exclusively based on gaseous centrifuge technology.[2] Iran will permit IAEA access to verify that uranium isotope separation production and R&D activities are consistent with this Annex.

T. ACTIVITIES WHICH COULD CONTRIBUTE TO THE DESIGN AND DEVELOPMENT OF A NUCLEAR EXPLOSIVE DEVICE

82. Iran will not engage in the following activities which could contribute to the development of a nuclear explosive device:

82.1. Designing, developing, acquiring, or using computer models to simulate nuclear explosive devices.

---

[2] For the purpose of this Annex, non-gaseous centrifuge uranium isotope separation-related research and development or production will include laser isotope separation systems, electromagnetic isotope separation systems, chemical exchange systems, gaseous diffusion systems, vortex and aerodynamic systems, and other such processes that separate uranium isotopes.

82.2. Designing, developing, fabricating, acquiring, or using multi-point explosive detonation systems suitable for a nuclear explosive device, unless approved by the Joint Commission for non-nuclear purposes and subject to monitoring.

82.3. Designing, developing, fabricating, acquiring, or using explosive diagnostic systems (streak cameras, framing cameras and flash x-ray cameras) suitable for the development of a nuclear explosive device, unless approved by the Joint Commission for non-nuclear purposes and subject to monitoring.

82.4. Designing, developing, fabricating, acquiring, or using explosively driven neutron sources or specialized materials for explosively driven neutron sources.

Attachment: Arak conceptual design

Fundamental Principles:

- Maximize use of the current infrastructure of original design of Arak research reactor, designated by the IAEA as IR-40, according to their respective ratings.
- Modernizing of the original design in order to be a multi-purpose research reactor comprising radio-isotope production, structural materials and fuel (pins and assembly prototypes) testing and able to conduct other neutronic experiments which demand high neutron fluxes (more than 10^{14}).
- Using heavy water as coolant, moderator and reflector. Light water would be utilized as an annular ring around the compact new core for safety reasons if necessary.
- Around 78 fuel assemblies in a tight hexagonal grid spacing with the following preliminary characteristics will be loaded.
- Up to 3.67 percent enriched UO_2, in the improved assembly design, will be used as fuel.
- Power will not exceed to 20 MWth.
- Adding different types of beam tubes to the existing beam tubes which being extended to the edge of the new compact core.
- Having one central channel in the center of the new core with passive cooling system for the purpose of structural materials and fuel pins and assembly prototypes testing with neutron flux beyond $2 \cdot 10^{14}$, twelve in-core irradiation channels (IIC) inside the core and twelve lateral irradiation chennals (LIC) just next to the outer ring of fuel assemblies.
- The location of the in-core and lateral irradiation channels should be designed and fixed to meet the best anticipated performances.
- Consistent with relevant section of Annex 1, subsidiary laboratories are part of the modernization project of the Arak Research Reactor. In Addition, Annex III reinforce design and construction of subsidiary laboratories.
- The highest tolerable pressure for the first and second loop is 0.33 Mpa (at the interance of the reactor pit).
- The highest possible flow rate for coolant is 610 kg/s at the pressure of 0.33 MPa in the main piping system and 42 Kg/sec for Moderator with the same conditions.

Preliminary Characteristics:

Core Parameters	**Values**
Power (MW)	20
Number of fuel assemblies	~ 78
Active length (cm)	~ 110
Lattice configuration	Hexagonal
Fuel pellets Material	UO_2
Fuel enrichment level	Up to 3.67 %
Clad material	Zr Alloys
Burnable poison	Yes, if necessary
Lattice pitch (cm)	~ 11
Coolant medium	D_2O
Moderator medium	D_2O
Reflector medium	D_2O
Reflector thickness (cm)	~ 50
Purity of D2O	~ 99.8%
Mass of D2O (mtons)	~ 60-70
Yearly makeup	Yes
K_{eff}	< 1.25
Core Excess reactivity (pcm)	< 20000
Cycle length (days) approximatly	~ 250
^{239}Pu at EoC (g)	~ 850
^{239}Pu purity at EoC	~ 78%
^{235}U consumption	~ 60%
Maximum Thermal Flux, E<0.625ev	~ $3 \cdot 10^{14}$
Maximum Fast Flux, E>0.625ev	~ $1 \cdot 10^{14}$
Minimum Thermal Flux, E<0.625ev	~ $1 \cdot 10^{14}$
Minimum Fast Flux, E>0.625ev	~ $1 \cdot 10^{14}$
Fluid velocity in channels (m/s)	~ 3.8
Channel mass flow rate (kg/s)	~ 2.4
Working pressure (MPa)	0.33
Fluid inlet temperature (°C)	~ 47
Fluid outlet temperature (°C)	~ 78
Core material	Mainly S.S. 304
Core wall Thichness (mm)	~ 30
Fuel Pellet Diameter (cm)	~ 0.65
Inner Clad Diameter (cm)	~ 0.67
Outer Clad Diameter (cm)	~ 0.8
Number of pins per assembly	12
Mass of UO2 in full core load (Kg)	~ 350
Core diameter (cm)	~ 240

JCPOA Annex II – Sanctions-related commitments

The sequence of implementation of the commitments detailed in this Annex is specified in Annex V (Implementation Plan) to this Joint Comprehensive Plan of Action (JCPOA).

A. European Union[1]

1. The EU and EU Member States commit to terminate all provisions of Council Regulation (EU) No 267/2012 (as subsequently amended) implementing all nuclear-related sanctions or restrictive measures as specified in Sections 1.1-1.10 below, to terminate all provisions of Council Decision 2010/413/CFSP (as subsequently amended), as specified in Sections 1.1-1.10 below, and to terminate or amend national implementing legislation as required, in accordance with Annex V:

1.1. Financial, banking and insurance measures[2]

1.1.1 Prohibition and authorisation regimes on financial transfers to and from Iran (Article 10 of Council Decision 2010/413/CFSP; Articles 30, 30a, 30b and 31 of Council Regulation (EU) No 267/2012);

1.1.2. Sanctions on banking activities (Article 11 of Council Decision 2010/413/CFSP; Article 33 of Council Regulation (EU) No 267/2012);

1.1.3. Sanctions on insurance (Article 12 of Council Decision 2010/413/CFSP; Article 35 of Council Regulation (EU) No 267/2012);

1.1.4. Sanctions on financial messaging services (Article 20(12) of Council Decision 2010/413/CFSP; Article 23(4) of Council Regulation (EU) No 267/2012);

1.1.5. Sanctions on financial support for trade with Iran (Article 8 of Council Decision 2010/413/CFSP);

1.1.6. Sanctions on grants, financial assistance and concessional loans (Article 9 of Council Decision 2010/413/CFSP);

1.1.7. Sanctions on Government of Iran public-guaranteed bonds (Article 13 of Council Decision 2010/413/CFSP; Article 34 of Council Regulation (EU) No 267/2012); and

1.1.8. Sanctions on associated services[3] for each of the categories above (see the references above).

---

[1] For the purposes of EU legislation, "Iranian person, entity or body" means:
(i) the State of Iran or any public authority thereof;
(ii) any natural person in, or resident in, Iran;
(iii) any legal person, entity or body having its registered office in Iran;
(iv) any legal person, entity or body, inside or outside Iran, owned or controlled directly or indirectly by one or more of the above mentioned persons or bodies.

[2] The headings and subheadings in this Annex are for descriptive purposes only.

[3] For the purposes of this Annex, the term "associated services" means any service – including technical assistance, training, insurance, re-insurance, brokering, transportation or financial service – necessary and ordinarily incident to the underlying activity for which sanctions have been lifted pursuant to this JCPOA.

1.2. Oil, gas and petrochemical sectors

1.2.1. Sanctions on the import of oil and gas from Iran (Articles 3a, 3c and 3e of Council Decision 2010/413/CFSP; Articles 11, 12 and 14a, and Annexes IV and IVA of Council Regulation (EU) No 267/2012);

1.2.2. Sanctions on the import of Iranian petrochemical products (Articles 3b and 3d of Council Decision 2010/413/CFSP; Articles 13 and 14, and Annex V of Council Regulation (EU) No 267/2012);

1.2.3. Sanctions on the export of key equipment for the oil, gas and petrochemical sectors (Articles 4, 4a and 4b of Council Decision 2010/413/CFSP; Articles 8, 9 and 10, and Annexes VI and VIA of Council Regulation (EU) No 267/2012);

1.2.4. Sanctions on investment in the oil, gas and petrochemical sectors (Articles 6, 6a and 7 of Council Decision 2010/413/CFSP; Articles 17(1), 17(2)(b) and (c), 17(3), 17(4), 17(5), 20 and 21 of Council Regulation (EU) No 267/2012); and

1.2.5. Sanctions on associated services for each of the categories above (see the references above).

1.3. Shipping, shipbuilding and transport sectors

1.3.1. Sanctions related to shipping and shipbuilding (Articles 4g, 4h, 8a, 18a and 18b of Council Decision 2010/413/CFSP; Articles 10a, 10b, 10c, 37a, and 37b, and Annex VIB of Council Regulation (EU) No 267/2012);

1.3.2. Sanctions related to the transport sector (Articles 15, 16, 17 and 18 of Council Decision 2010/413/CFSP, Articles 36 and 37 of Council Regulation (EU) No 267/2012); and

1.3.3. Sanctions on associated services for each of the categories above (see the references above).

1.4. Gold, other precious metals, banknotes and coinage

1.4.1. Sanctions on gold, precious metals and diamonds, banknotes and coinage (Articles 4c and 4d of Council Decision 2010/413/CFSP; Articles 15 and 16, and Annex VII of Council Regulation (EU) No 267/2012); and

1.4.2. Sanctions on associated services for each of the categories above (see the references above).

1.5. Nuclear proliferation-related measures

1.5.1. Sanctions related to proliferation-sensitive nuclear activities (goods and technology, investment and specialised training) (Articles 1(1) (a), (b), (d), (e), (2), (3) and (4), 2, 3, 5, 14 and 21 of Council Decision 2010/413/CFSP; Articles 2, 3, 4, 5, 6,7, 17(1) and (2)(a), 18, 19 and 22, and Annexes I, II and III of Council Regulation (EU) No 267/2012); and

1.5.2. Sanctions on associated services for the category above (see the references above).

1.6. Metals

1.6.1. Sanctions on metals (Articles 4e and 4f of Council Decision 2010/413/CFSP; Articles 15a, 15b and 15c, and Annex VIIB of Council Regulation (EU) No 267/2012); and

1.6.2. Sanctions on associated services for the category above (see the references above).

1.7. Software

1.7.1. Sanctions on software (Articles 4i and 4j of Council Decision 2010/413/CFSP; Articles 10d, 10e and 10f, and Annex VIIA of Council Regulation (EU) No 267/2012); and

1.7.2. Sanctions on associated services for the category above (see the references above).

1.8. Arms

1.8.1. Sanctions on arms (Articles 1(1)(c), (3) and (4), and 3 of Council Decision 2010/413/CFSP; Articles 5(1)(a) and (c), 17(1) and (2)(a), and 19 of Council Regulation (EU) No 267/2012); and

1.8.2. Sanctions on associated services for the category above (see the references above).

1.9. Listing of persons, entities and bodies (asset freeze and visa ban)

1.9.1. Asset freeze and visa ban measures applicable to:

1.9.1.1. listed Iranian banks and financial institutions, including the Central Bank of Iran;

1.9.1.2. listed persons, entities and bodies related to the oil, gas and petrochemical sectors;

1.9.1.3. listed persons, entities and bodies related to shipping, shipbuilding and transport;

1.9.1.4. other listed persons, entities and bodies not related to proliferation-sensitive nuclear-, arms- and ballistic missile-related activities;

1.9.1.5. listed persons, entities and bodies related to proliferation-sensitive nuclear-, arms- and ballistic missile-related activities; and

1.9.1.6. entities and individuals listed by the UN Security Council, as set out in Attachment 1, part I to this Annex for categories 1.9.1.1-1.9.1.4, Attachment 2, part I to this Annex for category 1.9.1.5, and Parts II of Attachments 1 and 2 to this Annex for category 1.9.1.6 (Articles 19 and 20, and Annexes I and II to Council Decision 2010/413/CFSP; Articles 23, 24, 25, 26, 27, 28, 28a, 28b and 29, and Annexes VIII and IX to Council Regulation (EU) No 267/2012).

1.10. Other provisions

1.10.1. The commitment in Section 1 covers all remaining provisions of Council Decision 2010/413/CFSP and Council Regulation (EU) No 267/2012 not specified above.

1.10.1.1. Definitions (Article 1 of Council Regulation (EU) No 267/2012); and

1.10.1.2. General and final provisions (Articles 22, 23, 24, 25, 26, 26a, 27 and 28 of Council Decision 2010/413/CFSP; Articles 38, 39, 40, 41, 42, 43, 43a, 44, 45, 46, 47, 48, 49, 50 and 51, and Annex X of Council Regulation (EU) No 267/2012).

2. The EU represents that the provisions listed in Section 1 above constitute the full and complete list of all EU nuclear-related sanctions or restrictive measures. These sanctions or restrictive measures will be lifted in accordance with Annex V.

3. Effects of the lifting of EU economic and financial sanctions

3.1. As a result of the lifting of sanctions specified in Section 1 above, the following activities, including associated services, will be allowed, beginning on implementation day, in accordance with this JCPOA and provided that such activities are otherwise consistent with EU and EU Member States' laws and regulations in effect:[4]

3.2. Financial, banking and insurance measures (See Sections 1.1.1 to 1.1.8)

3.2.1. Transfers of funds between EU persons, entities or bodies, including EU financial and credit institutions, and Iranian persons, entities or bodies, including Iranian financial and credit institutions, without the requirement for authorisation or notification;

3.2.2. Opening of new branches, subsidiaries or representative offices of Iranian banks in the territories of EU Member States; and the establishment of new joint ventures, or the taking of an ownership interest or the establishment of new correspondent banking relationships by Iranian banks with EU banks; and opening by EU persons, including EU financial and credit institutions, of representative offices, subsidiaries, joint ventures or bank accounts in Iran;

3.2.3. Provision of insurance or reinsurance to Iran or the Government of Iran, an Iranian legal person, entity or body, or a natural person or a legal person, entity or body acting on their behalf or at their direction;

3.2.4. Supply of specialised financial messaging services to any Iranian natural or legal persons, entities or bodies, including those listed in Attachment 1 to this Annex;

3.2.5. Entering into commitments by EU Member States to provide financial support for trade with Iran, including the granting of export credits,

[4] Unless specifically provided otherwise, the sanctions lifting described in this Section does not apply to transactions that involve persons still subject to restrictive measures and is without prejudice to sanctions that may apply under legal provisions other than those referred to in Section 1. Nothing in this JCPOA reflects a change in Iran's position on EU sanctions.

guarantees or insurance; and into commitments for grants, financial assistance and concessional loans to the Government of Iran; and

3.2.6. Sale or purchase of public or public-guaranteed bonds to and from Iran, the Government of Iran, the Central Bank of Iran, or Iranian banks and financial institutions or persons acting on their behalf.

3.3. Oil, gas and petrochemical sectors (See Sections 1.2.1 to 1.2.5)

3.3.1. Import, purchase, swap or transport of Iranian crude oil and petroleum products, natural gas or petrochemical products and related financing;

3.3.2. Sale, supply, transfer or export of equipment or technology, technical assistance, including training, used in the sectors of the oil, gas and petrochemical industries in Iran covering exploration, production and refining of oil and natural gas, including liquefaction of natural gas, to any Iranian person, in or outside Iran, or for use in Iran; and

3.3.3. Granting of any financial loan or credit to, the acquisition or extension of a participation in, and the creation of any joint venture with, any Iranian person that is engaged in the oil, gas and petrochemical sectors in Iran or outside Iran.

3.4. Shipping, shipbuilding and transport sectors (See Sections 1.3.1 to 1.3.3)

3.4.1. Sale, supply, transfer or export of naval equipment and technology for ship building, maintenance or refit, to Iran or to any Iranian persons engaged in this sector; the design, construction or the participation in the design or construction of cargo vessels and oil tankers for Iran or for Iranian persons; the provision of vessels designed or used for the transport or storage of oil and petrochemical products to Iranian persons, entities or bodies; and the provision of flagging and classification services, including those pertaining to technical specification, registration and identification numbers of any kind, to Iranian oil tankers and cargo vessels;

3.4.2. Access to the airports under the jurisdiction of EU Member States of all cargo flights operated by Iranian carriers or originating from Iran;

3.4.3. Cessation of inspection, seizure and disposal by EU Member States of cargoes to and from Iran in their territories with regard to items which are no longer prohibited; and

3.4.4. Provision of bunkering or ship supply services, or any other servicing of vessels, to Iranian-owned or Iranian-contracted vessels not carrying prohibited items; and the provision of fuel, engineering and maintenance services to Iranian cargo aircraft not carrying prohibited items.

3.5. Gold, other precious metals, banknotes and coinage (See Sections 1.4.1 to 1.4.2)

3.5.1. Sale, supply, purchase, export, transfer or transport of gold and precious metals as well as diamonds, and provision of related brokering, financing and security services, to, from or for the Government of Iran, its public bodies, corporations and agencies, or the Central Bank of Iran; and

3.5.2. Delivery of newly printed or minted or unissued Iranian denominated banknotes and coinage to, or for the benefit of the Central Bank of Iran.

3.6. Metals (See Sections 1.6.1 to 1.6.2)

3.6.1. Sale, supply, transfer or export of graphite and raw or semi-finished metals, such as aluminum and steel to any Iranian person, entity or body or for use in Iran, in connection with activities consistent with this JCPOA.

3.7. Software (See Sections 1.7.1 to 1.7.2)

3.7.1. Sale, supply, transfer or export of software for integrating industrial processes, including updates, to any Iranian person, entity or body, or for use in Iran, in connection with activities consistent with this JCPOA,

3.8. Listing of persons, entities and bodies (asset freeze and visa ban) (See Section 1.9.1)

3.8.1. As a result of delisting as specified in this Annex, releasing of all funds and economic resources which belong to, and making available funds or economic resources to, the persons, entities and bodies, including Iranian banks and financial institutions, the Central Bank of Iran, listed in Attachment 1 to this Annex; and

3.8.2. As a result of delisting as specified in this Annex, entry into, or transit through the territories of EU Member States of individuals listed in Attachment 1 to this Annex.

B. United States[5]

4. The United States commits to cease the application of, and to seek such legislative action as may be appropriate to terminate, or modify to effectuate the termination of, all nuclear-related sanctions[6] as specified in Sections 4.1-4.9 below, and to terminate Executive Orders 13574, 13590, 13622 and 13645, and Sections 5-7 and 15 of Executive Order 13628, in accordance with Annex V.[7]

4.1. Financial and banking measures

4.1.1. Sanctions on transactions with individuals and entities set out in Attachment 3 to this Annex, including: the Central Bank of Iran (CBI) and other specified Iranian financial institutions; the National Iranian Oil Company (NIOC),[8] Naftiran Intertrade Company (NICO), National Iranian Tanker Company (NITC) and other specified individuals and entities identified as Government of Iran by the Office of Foreign Assets Control; and certain designated individuals and entities on the Specially Designated Nationals and Blocked Persons List (SDN List) (Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (CISADA) Section 104(c)(2)(E)(ii)(I); National Defense Authorization Act for Fiscal Year 2012 (NDAA) Sections 1245(d)(1) and (3); Iran Freedom and Counter-Proliferation Act of 2012 (IFCA) Sections 1244(c)(1) and (d), 1245(a)(1)(A), (a)(1)(C)(i)(II) and (c), 1246(a) and 1247(a); Sections 1(a)(i) and 5(a) of Executive Order (E.O.) 13622 and Sections 2(a)(i) and 3(a)(i) of E.O. 13645);

---

[5] For the purposes of U.S. legislation, "Iranian person" means (A) an individual who is a citizen or national of Iran; and (B) an entity organised under the laws of Iran or otherwise subject to the jurisdiction of the Government of Iran.

[6] The sanctions that the United States will cease to apply, and subsequently terminate, or modify to effectuate the termination of, pursuant to its commitment under Section 4 are those directed towards non-U.S. persons. For the purposes of Sections 4 and 6-7 of this JCPOA, the term "non-U.S. person" means any individual or entity, excluding (i) any United States citizen, permanent resident alien, entity organised under the laws of the United States or any jurisdiction within the United States (including foreign branches), or any person in the United States, and (ii) any entity owned or controlled by a U.S. person. For the purposes of (ii) of the preceding sentence, an entity is "owned or controlled" by a U.S. person if the U.S. person: (i) holds a 50 percent or greater equity interest by vote or value in the entity; (ii) holds a majority of seats on the board of directors of the entity; or (iii) otherwise controls the actions, policies, or personnel decisions of the entity. U.S. persons and U.S.-owned or -controlled foreign entities will continue to be generally prohibited from conducting transactions of the type permitted pursuant to this JCPOA, unless authorised to do so by the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC).

[7] All citations to statutes and Executive orders included in this JCPOA refer to the statute or Executive order as amended as of the conclusion date of this JCPOA, including: the Iran Sanctions Act of 1996 (ISA), as amended by Section 102 of the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (CISADA) and Sections 201-207 and 311 of the Iran Threat Reduction and Syria Human Rights Act of 2012 (TRA); CISADA, as amended by Sections 214-216, 222, 224, 311-312, 402-403 and 605 of TRA and Section 1249 of the Iran Freedom and Counter-Proliferation Act of 2012 (IFCA); the National Defense Authorization Act for Fiscal Year 2012 (NDAA), as amended by Sections 503-504 of TRA and Section 1250 of IFCA; Executive Order (E.O.) 13622, as amended by Section 15 of E.O. 13628 and Section 16 of E.O. 13645. The citations listed in Section 4 include authorities under which secondary sanctions will no longer apply as a result of actions described in Section 4.8.1.

[8] Removal of NIOC from the SDN List, as provided for in Section 4.8.1, will include resolution of related designations and determinations.

4.1.2. Sanctions on the Iranian Rial (NDAA Sections 1245(d)(1) and (3); IFCA Sections 1244(c)(1), 1246(a) and 1247(a); Section 5(a) of E.O. 13622 and Sections 1(a), 2(a)(i) and 3(a)(i) of E.O. 13645);

4.1.3. Sanctions on the provision of U.S. banknotes to the Government of Iran (NDAA Sections 1245(d)(1) and (3); IFCA Sections 1244(c)(1) and (d), 1246(a) and 1247(a); Section 5(a) of E.O. 13622 and Sections 2(a)(i) and 3(a)(i) of E.O. 13645);

4.1.4. Bilateral trade limitations on Iranian revenues held abroad, including limitations on their transfer (NDAA Sections 1245(d)(1) and (3); IFCA Sections 1244(c)(1), (d) and (h)(2), 1246(a) and 1247(a); Sections 1(a)(i)-(ii), 2(a)(i) and 5(a) of E.O. 13622 and Sections 2(a)(i) and 3(a)(i) of E.O. 13645);

4.1.5. Sanctions on the purchase, subscription to, or facilitation of the issuance of Iranian sovereign debt, including governmental bonds (NDAA Sections 1245(d)(1) and (3); Iran Threat Reduction and Syria Human Rights Act of 2012 (TRA) Section 213(a); IFCA Sections 1244(c)(1) and (d), 1246(a) and 1247(a); Sections 1(a)(i) and 5(a) of E.O. 13622 and Sections 2(a)(i) and 3(a)(i) of E.O. 13645);

4.1.6. Sanctions on financial messaging services to the CBI and Iranian financial institutions set out in Attachment 3 to this Annex (NDAA Sections 1245(d)(1) and (3); TRA Section 220; IFCA Sections 1244(c)(1) and (d), 1246(a) and 1247(a); Section 5(a) of E.O. 13622 and Sections 2(a)(i) and 3(a)(i) of E.O. 13645); and

4.1.7. Sanctions on associated services[9] for each of the categories above (see individual citation references above).

4.2. Insurance measures

4.2.1. Sanctions on the provision of underwriting services, insurance, or re-insurance in connection with activities consistent with this JCPOA, including activities with individuals and entities set forth in Attachment 3 to this Annex (Iran Sanctions Act of 1996 (ISA) Section 5(a)(7); NDAA Sections 1245(d)(1) and (3); TRA Sections 211(a) and 212(a); IFCA Sections 1244(c)(1) and (d), 1246(a) and 1247(a); Section 5(a) of E.O. 13622 and Sections 2(a)(i) and 3(a)(i) of E.O. 13645).

4.3. Energy and petrochemical sectors

4.3.1. Efforts to reduce Iran's crude oil sales, including limitations on the quantities of Iranian crude oil sold and the nations that can purchase Iranian crude oil (ISA Section 5(a)(7); NDAA Sections 1245(d)(1) and (3); TRA Section 212(a); IFCA Sections 1244(c)(1) and (d), 1246(a) and 1247(a); Section 1 of E.O. 13574, Sections 1(a)(i)-(ii), 2(a)(i) and 5(a) of E.O. 13622, Section 5 of E.O. 13628, and Sections 2(a)(i) and 3(a)(i) of E.O. 13645);

4.3.2. Sanctions on investment, including participation in joint ventures, goods, services, information, technology and technical expertise and support for Iran's oil, gas, and petrochemical sectors (ISA Sections 5(a)(1)-(2) and

[9] See footnote 3 for the meaning of "associated services".

(4)-(8); TRA Section 212(a); IFCA Sections 1244(c)(1), (d) and (h)(2), 1245(a)(1)(B), (a)(1)(C)(i)(I)-(II), (a)(1)(C)(ii)(I)-(II) and (c), 1246(a) and 1247(a); Section 1 of E.O. 13574, Section 1 of E.O. 13590, Sections 1(a)(i)-(ii), 2(a)(i)-(iii) and 5(a) of E.O. 13622, and Sections 2(a)(i) and 3(a)(i) of E.O. 13645);

4.3.3. Sanctions on the purchase, acquisition, sale, transportation, or marketing of petroleum, petrochemical products and natural gas from Iran (NDAA Sections 1245(d)(1) and (3); TRA Section 212(a); IFCA Sections 1244(c)(1), (d) and (h)(2), 1246(a) and 1247(a); Sections 1(a)(i)-(iii), 2(a)(i)-(ii) and 5(a) of E.O. 13622, and Sections 2(a)(i) and 3(a)(i) of E.O. 13645);

4.3.4. Sanctions on the export, sale or provision of refined petroleum products and petrochemical products to Iran (ISA Section 5(a)(3); NDAA Sections 1245(d)(1) and (3); TRA Section 212(a); IFCA Sections 1244(c)(1) and (d), 1246(a) and 1247(a); Section 1 of E.O. 13574, Sections 1(a)(i) and 5(a) of E.O. 13622, Section 5 of E.O. 13628, and Sections 2(a)(i) and 3(a)(i) of E.O. 13645);

4.3.5. Sanctions on transactions with Iran's energy sector including with NIOC, NICO and NITC (NDAA Sections 1245(d)(1) and (3); IFCA Sections 1244(c)(1), (d) and (h)(2), 1246(a) and 1247(a); TRA Section 212(a); Sections 1(a)(i)-(iii), 2(a)(i)-(ii) and 5(a) of E.O. 13622, and Sections 2(a)(i) and 3(a)(i) of E.O. 13645); and

4.3.6. Sanctions on associated services for each of the categories above (see individual citation references above).

4.4. Shipping, shipbuilding and port sectors

4.4.1. Sanctions on transactions with Iran's shipping and shipbuilding sectors and port operators including IRISL, South Shipping Line, and NITC, and the port operator(s) of Bandar Abbas[10] (TRA Sections 211(a) and 212(a); IFCA Sections 1244(c)(1) and (d); 1245(a)(1)(B), (a)(1)(C)(i)(I)-(II), (a)(1)(C)(ii)(I)-(II) and (c), 1246(a) and 1247(a); Section 5(a) of E.O. 13622 and Sections 2(a)(i) and 3(a)(i) of E.O. 13645); and

4.4.2. Sanctions on associated services for each of the categories above (see individual citation references above).

4.5. Gold and other precious metals

4.5.1. Sanctions on Iran's trade in gold and other precious metals (NDAA Sections 1245(d)(1) and (3); IFCA Sections 1244(c)(1), 1245(a)(1)(A) and (c), 1246(a) and 1247(a); Section 5(a) of E.O. 13622 and Sections 2(a)(i) and 3(a)(i) of E.O. 13645); and

4.5.2. Sanctions on associated services for each of the categories above (see individual citation references above).

4.6. Software and metals

4.6.1. Sanctions on trade with Iran in graphite, raw or semi-finished metals such as aluminum and steel, coal, and software for integrating industrial processes,

[10] This commitment in Section 4.4.1 is based on the port operator(s) of Bandar Abbas no longer being controlled by a person on the SDN List.

in connection with activities consistent with this JCPOA, including trade with individuals and entities set forth in Attachments 3 and 4 to this Annex (NDAA Sections 1245(d)(1) and (3); IFCA Sections 1244(c)(1), 1245(a)(1)(B)-(C) and (c), 1246(a) and 1247(a); Section 5(a) of E.O. 13622 and Sections 2(a)(i) and 3(a)(i) of E.O. 13645); and

4.6.2. Sanctions on associated services for each of the categories above (see individual citation references above).

4.7. Automotive sector

4.7.1. Sanctions on the sale, supply or transfer of goods and services used in connection with Iran's automotive sector (NDAA Sections 1245(d)(1) and (3); IFCA Sections 1244(c)(1), 1245(a)(1)(B), (a)(1)(C)(i)(II), (a)(1)(C)(ii)(II) and (c), 1246(a) and 1247(a); Section 5(a) of E.O. 13622 and Sections 2(a)(i), 3(a)(i)-(ii), 5 and 6 of E.O. 13645); and

4.7.2. Sanctions on associated services for each of the categories above (see individual citation references above).

4.8. Designations and other sanctions listings

4.8.1. Removal of individuals and entities set out in Attachments 3 and 4 to this Annex from the Specially Designated Nationals and Blocked Persons List (SDN List), the Foreign Sanctions Evaders List, and/or the Non-SDN Iran Sanctions Act List (Removal of designations and/or sanctions imposed under ISA Section 5(a), IFCA Section 1244(d)(1) and TRA Section 212; and removals pursuant to the International Emergency Economic Powers Act of certain persons listed pursuant to E.O. 13382, E.O. 13608, E.O. 13622, and E.O. 13645).

4.9. Nuclear proliferation-related measures

4.9.1. Sanctions under the Iran, North Korea and Syria Nonproliferation Act on the acquisition of nuclear-related commodities and services for nuclear activities contemplated in the JCPOA, to be consistent with the U.S. approach to other non-nuclear-weapon states under the NPT;

4.9.2. Sanctions on joint ventures relating to the mining, production, or transportation of uranium (ISA Section 5(b)(2)); and

4.9.3. Exclusion of Iranian citizens from higher education coursework related to careers in nuclear science, nuclear engineering or the energy sector (TRA Section 501).

5. Other trade measures

5.1. The United States commits to:[11]

5.1.1. Allow for the sale of commercial passenger aircraft and related parts and services to Iran by licensing the (i) export, re-export, sale, lease or transfer to Iran of commercial passenger aircraft for exclusively civil aviation end-use,

[11] To give effect to the measures described in this Section 5.1, the United States will license activities that do not involve any person on the SDN List and are otherwise consistent with applicable U.S. laws and regulations, including but not limited to the Export Administration Act, the Federal Food, Drug and Cosmetic Act and the Iran-Iraq Arms Nonproliferation Act.

(ii) export, re-export, sale, lease or transfer to Iran of spare parts and components for commercial passenger aircraft, and (iii) provision of associated serviced, including warranty, maintenance, and repair services and safety-related inspections, for all the foregoing, provided that licensed items and services are used exclusively for commercial passenger aviation;[12]

5.1.2. License non-U.S. entities that are owned or controlled by a U.S. person[13] to engage in activities with Iran that are consistent with this JCPOA; and

5.1.3. License the importation into the United States of Iranian-origin carpets and foodstuffs, including pistachios and caviar.

6. The United States represents that the provisions listed in Section 4 above constitute the full and complete list of all U.S. nuclear-related sanctions. These sanctions will be lifted in accordance with Annex V.

7. Effects of the lifting of U.S. economic and financial sanctions:

7.1. As a result of the lifting of sanctions specified in Section 4 above, beginning on implementation day such sanctions, including associated services, would not apply to non-U.S. persons who carry out the following or that:[14]

7.2. Financial and banking measures[15] (See Sections 4.1.1 to 4.1.7)

Engage in activities, including financial and banking transactions, with the Government of Iran, the Central Bank of Iran, Iranian financial institutions and other Iranian persons specified in Attachment 3 to this Annex, including the provision of loans, transfers, accounts (including the opening and maintenance of correspondent and payable through accounts at non-U.S. financial institutions), investments, securities, guarantees, foreign exchange (including Rial related transactions), letters of credit and commodity futures or options, the provision of specialised financial messaging services and facilitation of direct or indirect access thereto, the purchase or acquisition by

[12] Licenses issued in furtherance of Section 5.1.1 will include appropriate conditions to ensure that licensed activities do not involve, and no licensed aircraft, goods, or services are re-sold or re-transferred to, any person on the SDN list. Should the United States determine that licensed aircraft, goods, or services have been used for purposes other than exclusively civil aviation end-use, or have been re-sold or re-transferred to persons on the SDN List, the United States would view this as grounds to cease performing its commitments under Section 5.1.1 in whole or in part.

[13] For the purposes of Section 5.1.2 of this JCPOA, a non-U.S. entity is owned or controlled by a U.S. person if the U.S. person: (i) holds a 50 per cent or greater equity interest by vote or value in the entity; (ii) holds a majority of seats on the board of directors of the entity; or (iii) otherwise controls the actions, policies, or personnel decisions of the entity.

[14] Unless specifically provided otherwise, the sanctions lifting described in this Section does not apply to transactions that involve persons on the SDN List and is without prejudice to sanctions that may apply under legal provisions other than those cited in Section 4. Nothing in this JCPOA reflects a change in Iran's position on U.S. sanctions.

[15] For the purposes of the cessation of application of the provisions set out in Sections 4.1.1-4.1.7, the effects described for non-U.S. financial institutions extend to the activities outside of U.S. jurisdiction of international financial institutions.

the Government of Iran of U.S. bank notes, and the purchase, subscription to, or facilitation of the issuance of Iranian sovereign debt.[16]

7.3. Insurance measures (See Section 4.2.1)

Provide underwriting services, insurance, or re-insurance in connection with activities consistent with this JCPOA, including activities with individuals and entities set forth in Attachment 3 to this Annex, including underwriting services, insurance, or re-insurance in connection with activities in the energy, shipping, and shipbuilding sectors of Iran, for the National Iranian Oil Company (NIOC) or the National Iranian Tanker Company (NITC), or for vessels that transport crude oil, natural gas, liquefied natural gas, petroleum and petrochemical products to or from Iran.

7.4. Energy and petrochemical sectors (See Sections 4.3.1 to 4.3.6)

Are part of the energy sector of Iran; purchase, acquire, sell, transport or market petroleum, petroleum products (including refined petroleum products), petrochemical products or natural gas (including liquefied natural gas) to or from Iran; provide to Iran support, investment (including through joint ventures), goods, services (including financial services) and technology that can be used in connection with Iran's energy sector, the development of its petroleum resources, its domestic production of refined petroleum products and petrochemical products; or engage in activities with Iran's energy sector, including NIOC, NITC, and NICO).

7.5. Shipping, shipbuilding and port sectors (See Sections 4.4.1 to 4.4.2)

Are part of the shipping or shipbuilding sectors of Iran; own, operate, control or insure a vessel used to transport crude oil, petroleum products (including refined petroleum products), petrochemical products or natural gas (including liquefied natural gas) to or from Iran; operate a port in Iran, engage in activities with, or provide financial services and other goods and services used in connection with, the shipping and shipbuilding sectors of Iran or a port operator in Iran (including the port operator(s) of Bandar Abbas[17]), including port services, such as bunkering and inspection, classification, and financing, and the sale, leasing, and provision of vessels to Iran, including to the Islamic Republic of Iran Shipping Lines (IRISL), NITC, and South Shipping Line Iran or their affiliates.

7.6. Gold and other precious metals (See Sections 4.5.1 to 4.5.2)

Sell, supply, export or transfer, directly or indirectly, to or from Iran, gold and other precious metals, or conduct or facilitate a financial transaction or

[16] Non-U.S., non-Iranian financial institutions engaging in transactions with Iranian financial institutions (including the Central Bank of Iran) not appearing on the SDN List will not be exposed to sanctions as a result of those Iranian financial institutions engaging in transactions or banking relationships involving Iranian individuals and entities, including financial institutions, on the SDN List, provided that the non-U.S., non-Iranian financial institution does not conduct or facilitate, and is not otherwise involved in, those specific transactions or banking relationships with the Iranian individuals and entities, including financial institutions, on the SDN List.

[17] The effects described in Section 7.5 with respect to the port operator(s) of Bandar Abbas are based on the port operator(s) of Bandar Abbas no longer being controlled by a person on the SDN List.

provide services for the foregoing including security, insurance and transportation.

7.7. Software and metals (See Sections 4.6.1 to 4.6.2)

Sell, supply, or transfer, directly or indirectly, graphite, raw or semi-finished metals such as aluminum and steel, coal, and software for integrating industrial processes, to or from Iran in connection with activities consistent with this JCPOA, including trade with individuals and entities set forth in Attachment 3 to this Annex, and the sale, supply, or transfer of such materials to the energy, petrochemical, shipping and shipbuilding sectors of Iran, and Iranian ports, or conduct or facilitate a financial transaction or provide services for the foregoing, including insurance and transportation.

7.8. Automotive sector (See Sections 4.7.1 to 4.7.2)

Conduct or facilitate financial or other transactions for the sale, supply or transfer to Iran of goods and services used in connection with the automotive sector of Iran.

7.9. Designations and other sanctions listings (See Section 4.8.1)

The removal of designations and/or sanctions as described in Section 4.8.1, ceasing the application of secondary sanctions for transactions with individuals and entities set out in Attachment 3 to this Annex; and unblocking of property and interests in property within U.S. jurisdiction for individuals and entities set out in Attachment 3 to this Annex.

ATTACHMENT 1 - PART I

LIST OF PERSONS, ENTITIES AND BODIES SET OUT IN ANNEX II TO COUNCIL DECISION 2010/413/CFSP AND ANNEX IX TO COUNCIL REGULATION (EU) NO 267/2012

ACENA SHIPPING COMPANY LIMITED
ADVANCE NOVEL
AGHAJARI OIL & GAS PRODUCTION COMPANY
AGHAZADEH, Reza
AHMADIAN, Mohammad
AKHAVAN-FARD, Massoud
ALPHA EFFORT LTD
ALPHA KARA NAVIGATION LIMITED
ALPHA NARI NAVIGATION LIMITED
ARIAN BANK
ARVANDAN OIL & GAS COMPANY
ASHTEAD SHIPPING COMPANY LTD
ASPASIS MARINE CORPORATION
ASSA CORPORATION
ASSA CORPORATION LTD
ATLANTIC INTERMODAL
AVRASYA CONTAINER SHIPPING LINES
AZARAB INDUSTRIES
AZORES SHIPPING COMPANY ALIAS AZORES SHIPPING FZE LLC
BANCO INTERNACIONAL DE DESARROLLO CA
BANK KARGOSHAE
BANK MELLAT
BANK MELLI IRAN INVESTMENT COMPANY
BANK MELLI IRAN ZAO
BANK MELLI PRINTING AND PUBLISHING COMPANY
BANK MELLI,
BANK OF INDUSTRY AND MINE
BANK REFAH KARGARAN
BANK TEJARAT
BATENI, Naser
BEST PRECISE LTD
BETA KARA NAVIGATION LTD
BHS MARITIME LIMITED
BIS MARITIME LIMITED
BONAB RESEARCH CENTER
BRAIT HOLDING SA
BRIGHT JYOTI SHIPPING
BRIGHT SHIP FZC
BUSHEHR SHIPPING COMPANY LIMITED
BYFLEET SHIPPING COMPANY LTD
CEMENT INVESTMENT AND DEVELOPMENT COMPANY
CENTRAL BANK OF IRAN
CHAPLET SHIPPING LIMITED
COBHAM SHIPPING COMPANY LTD

CONCEPT GIANT LTD
COOPERATIVE DEVELOPMENT BANK
CRYSTAL SHIPPING FZE
DAJMAR, Mohammad Hossein
DAMALIS MARINE CORPORATION
DARYA CAPITAL ADMINISTRATION GMBH
DARYA DELALAN SEFID KHAZAR SHIPPING COMPANY
DELTA KARA NAVIGATION LTD
DELTA NARI NAVIGATION LTD
DIAMOND SHIPPING SERVICES
DORKING SHIPPING COMPANY LTD
EAST OIL & GAS PRODUCTION COMPANY
EDBI EXCHANGE COMPANY
EDBI STOCK BROKERAGE COMPANY
EFFINGHAM SHIPPING COMPANY LTD
EIGHTH OCEAN ADMINISTRATION GMBH
EIGHTH OCEAN GMBH & CO. KG
ELBRUS LTD
ELCHO HOLDING LTD
ELEGANT TARGET DEVELOPMENT LIMITED
ELEVENTH OCEAN ADMINISTRATION GMBH
ELEVENTH OCEAN GMBH & CO. KG
EMKA COMPANY
EPSILON NARI NAVIGATION LTD
E-SAIL A.K.A.E-SAIL SHIPPING COMPANY
ETA NARI NAVIGATION LTD
ETERNAL EXPERT LTD.
EUROPÄISCH-IRANISCHE HANDELSBANK
EXPORT DEVELOPMENT BANK OF IRAN
FAIRWAY SHIPPING
FAQIHIAN, Dr Hoseyn
FARNHAM SHIPPING COMPANY LTD
FASIRUS MARINE CORPORATION
FATSA
FIFTEENTH OCEAN ADMINISTRATION GMBH
FIFTEENTH OCEAN GMBH & CO. KG
FIFTH OCEAN ADMINISTRATION GMBH
FIFTH OCEAN GMBH & CO. KG
FIRST ISLAMIC INVESTMENT BANK
FIRST OCEAN ADMINISTRATION GMBH
FIRST OCEAN GMBH & CO. KG
FIRST PERSIAN EQUITY FUND
FOURTEENTH OCEAN ADMINISTRATION GMBH
FOURTEENTH OCEAN GMBH & CO. KG
FOURTH OCEAN ADMINISTRATION GMBH
FOURTH OCEAN GMBH & CO. KG
FUTURE BANK BSC
GACHSARAN OIL & GAS COMPANY
GALLIOT MARITIME INCORPORATION
GAMMA KARA NAVIGATION LTD

GIANT KING LIMITED
GOLDEN CHARTER DEVELOPMENT LTD.
GOLDEN SUMMIT INVESTMENTS LTD.
GOLDEN WAGON DEVELOPMENT LTD.
GOLPARVAR, Gholam Hossein
GOMSHALL SHIPPING COMPANY LTD
GOOD LUCK SHIPPING COMPANY LLC
GRAND TRINITY LTD.
GREAT EQUITY INVESTMENTS LTD.
GREAT METHOD LTD
GREAT PROSPECT INTERNATIONAL LTD.
HAFIZ DARYA SHIPPING LINES
HANSEATIC TRADE TRUST & SHIPPING GMBH
HARVEST SUPREME LTD.
HARZARU SHIPPING
HELIOTROPE SHIPPING LIMITED
HELIX SHIPPING LIMITED
HK INTERTRADE COMPANY LTD
HONG TU LOGISTICS PRIVATE LIMITED
HORSHAM SHIPPING COMPANY LTD
IFOLD SHIPPING COMPANY LIMITED
INDUS MARITIME INCORPORATION
INDUSTRIAL DEVELOPMENT & RENOVATION ORGANIZATION
INSIGHT WORLD LTD
INTERNATIONAL SAFE OIL
IOTA NARI NAVIGATION LIMITED
IRAN ALUMINIUM COMPANY
IRAN FUEL CONSERVATION ORGANIZATION
IRAN INSURANCE COMPANY
IRAN LIQUEFIED NATURAL GAS CO.
IRANIAN OFFSHORE ENGINEERING & CONSTRUCTION CO
IRANIAN OIL COMPANY LIMITED
IRANIAN OIL PIPELINES AND TELECOMMUNICATIONS COMPANY (IOPTC)
IRANIAN OIL TERMINALS COMPANY
IRANO MISR SHIPPING COMPANY
IRINVESTSHIP LTD
IRISL (MALTA) LTD
IRISL EUROPE GMBH
IRISL MARINE SERVICES AND ENGINEERING COMPANY
IRISL MARITIME TRAINING INSTITUTE
IRITAL SHIPPING SRL
ISI MARITIME LIMITED
ISIM AMIN LIMITED
ISIM ATR LIMITED
ISIM OLIVE LIMITED
ISIM SAT LIMITED
ISIM SEA CHARIOT LTD
ISIM SEA CRESCENT LTD
ISIM SININ LIMITED

ISIM TAJ MAHAL LTD
ISIM TOUR COMPANY LIMITED
ISLAMIC REPUBLIC OF IRAN SHIPPING LINES
JACKMAN SHIPPING COMPANY
KALA NAFT
KALAN KISH SHIPPING COMPANY LTD
KAPPA NARI NAVIGATION LTD
KARA SHIPPING AND CHARTERING GMBH
KAROON OIL & GAS PRODUCTION COMPANY
KAVERI MARITIME INCORPORATION
KAVERI SHIPPING LLC
KEY CHARTER DEVELOPMENT LTD.
KHALILIPOUR, Said Esmail
KHANCHI, Ali Reza
KHAZAR EXPL & PROD CO
KHAZAR SHIPPING LINES
KHEIBAR COMPANY
KING PROSPER INVESTMENTS LTD.
KINGDOM NEW LTD
KINGSWOOD SHIPPING COMPANY LIMITED
KISH SHIPPING LINE MANNING COMPANY
LAMBDA NARI NAVIGATION LIMITED
LANCING SHIPPING COMPANY LIMITED
LOGISTIC SMART LTD
LOWESWATER LTD
MACHINE SAZI ARAK
MAGNA CARTA LIMITED
MALSHIP SHIPPING AGENCY
MARBLE SHIPPING LIMITED
MAROUN OIL & GAS COMPANY
MASJED-SOLEYMAN OIL & GAS COMPANY
MASTER SUPREME INTERNATIONAL LTD.
MAZANDARAN CEMENT COMPANY
MEHR CAYMAN LTD.
MELLAT BANK SB CJSC
MELLI AGROCHEMICAL COMPANY PJS
MELLI BANK PLC
MELLI INVESTMENT HOLDING INTERNATIONAL
MELODIOUS MARITIME INCORPORATION
METRO SUPREME INTERNATIONAL LTD.
MIDHURST SHIPPING COMPANY LIMITED (MALTA)
MILL DENE LTD
MINISTRY OF ENERGY
MINISTRY OF PETROLEUM
MODALITY LTD
MODERN ELEGANT DEVELOPMENT LTD.
MOUNT EVEREST MARITIME INCORPORATION
NAFTIRAN INTERTRADE COMPANY
NAFTIRAN INTERTRADE COMPANY SRL
NAMJOO, Majid

NARI SHIPPING AND CHARTERING GMBH & CO. KG
NARMADA SHIPPING
NATIONAL IRANIAN DRILLING COMPANY
NATIONAL IRANIAN GAS COMPANY
NATIONAL IRANIAN OIL COMPANY
NATIONAL IRANIAN OIL COMPANY NEDERLAND (A.K.A.: NIOC NETHERLANDS REPRESENTATION OFFICE)
NATIONAL IRANIAN OIL COMPANY PTE LTD
NATIONAL IRANIAN OIL COMPANY, INTERNATIONAL AFFAIRS LIMITED
NATIONAL IRANIAN OIL ENGINEERING AND CONSTRUCTION COMPANY (NIOEC)
NATIONAL IRANIAN OIL PRODUCTS DISTRIBUTION COMPANY (NIOPDC)
NATIONAL IRANIAN OIL REFINING AND DISTRIBUTION COMPANY
NATIONAL IRANIAN TANKER COMPANY
NEUMAN LTD
NEW DESIRE LTD
NEW SYNERGY
NEWHAVEN SHIPPING COMPANY LIMITED
NINTH OCEAN ADMINISTRATION GMBH
NINTH OCEAN GMBH & CO. KG
NOOR AFZA GOSTAR
NORTH DRILLING COMPANY
NUCLEAR FUEL PRODUCTION AND PROCUREMENT COMPANY
OCEAN CAPITAL ADMINISTRATION GMBH
OCEAN EXPRESS AGENCIES PRIVATE LIMITED
ONERBANK ZAO
OXTED SHIPPING COMPANY LIMITED
PACIFIC SHIPPING
PARS SPECIAL ECONOMIC ENERGY ZONE
PARTNER CENTURY LTD
PEARL ENERGY COMPANY LTD
PEARL ENERGY SERVICES, SA
PERSIA INTERNATIONAL BANK PLC
PETRO SUISSE
PETROIRAN DEVELOPMENT COMPANY LTD
PETROLEUM ENGINEERING & DEVELOPMENT COMPANY
PETROPARS INTERNATIONAL FZE
PETROPARS IRAN COMPANY
PETROPARS LTD.
PETROPARS OILFIELD SERVICES COMPANY
PETROPARS OPERATION & MANAGEMENT COMPANY
PETROPARS RESOURCES ENGINEERING LTD
PETROPARS UK LIMITED
PETWORTH SHIPPING COMPANY LIMITED
POST BANK OF IRAN
POWER PLANTS' EQUIPMENT MANUFACTURING COMPANY (SAAKHTE TAJHIZATE NIROOGAHI)
PROSPER METRO INVESTMENTS LTD.
RASTKHAH, Engineer Naser
REIGATE SHIPPING COMPANY LIMITED

RESEARCH INSTITUTE OF NUCLEAR SCIENCE & TECHNOLOGY
REZVANIANZADEH, Mohammad Reza
RISHI MARITIME INCORPORATION
SACKVILLE HOLDINGS LTD
SAFIRAN PAYAM DARYA SHIPPING COMPANY
SALEHI, Ali Akbar
SANFORD GROUP
SANTEXLINES
SECOND OCEAN ADMINISTRATION GMBH
SECOND OCEAN GMBH & CO. KG
SEIBOW LOGISTICS LIMITED
SEVENTH OCEAN ADMINISTRATION GMBH
SEVENTH OCEAN GMBH & CO. KG
SHALLON LTD
SHEMAL CEMENT COMPANY
SHINE STAR LIMITED
SHIPPING COMPUTER SERVICES COMPANY
SILVER UNIVERSE INTERNATIONAL LTD.
SINA BANK
SINO ACCESS HOLDINGS
SINOSE MARITIME
SISCO SHIPPING COMPANY LTD
SIXTEENTH OCEAN ADMINISTRATION GMBH
SIXTEENTH OCEAN GMBH & CO. KG
SIXTH OCEAN ADMINISTRATION GMBH
SIXTH OCEAN GMBH & CO. KG
SMART DAY HOLDINGS LTD
SOLTANI, Behzad
SORINET COMMERCIAL TRUST (SCT)
SOROUSH SARAMIN ASATIR
SOUTH WAY SHIPPING AGENCY CO. LTD
SOUTH ZAGROS OIL & GAS PRODUCTION COMPANY
SPARKLE BRILLIANT DEVELOPMENT LIMITED
SPRINGTHORPE LIMITED
STATIRA MARITIME INCORPORATION
SUREH (NUCLEAR REACTORS FUEL COMPANY)
SYSTEM WISE LTD
TAMALARIS CONSOLIDATED LTD
TENTH OCEAN ADMINISTRATION GMBH
TENTH OCEAN GMBH & CO. KG
TEU FEEDER LIMITED
THETA NARI NAVIGATION
THIRD OCEAN ADMINISTRATION GMBH
THIRD OCEAN GMBH & CO. KG
THIRTEENTH OCEAN ADMINISTRATION GMBH
THIRTEENTH OCEAN GMBH & CO. KG
TOP GLACIER COMPANY LIMITED
TOP PRESTIGE TRADING LIMITED
TRADE CAPITAL BANK
TRADE TREASURE

TRUE HONOUR HOLDINGS LTD
TULIP SHIPPING INC
TWELFTH OCEAN ADMINISTRATION GMBH
TWELFTH OCEAN GMBH & CO. KG
UNIVERSAL TRANSPORTATION LIMITATION UTL
VALFAJR 8TH SHIPPING LINE
WEST OIL & GAS PRODUCTION COMPANY
WESTERN SURGE SHIPPING COMPANY LIMITED
WISE LING SHIPPING COMPANY LIMITED
ZANJANI, Babak
ZETA NERI NAVIGATION

ATTACHMENT 1 - PART II

LIST OF PERSONS, ENTITIES AND BODIES SET OUT IN ANNEX I TO COUNCIL DECISION 2010/413/CFSP AND ANNEX VIII TO COUNCIL REGULATION (EU) NO 267/2012

AGHA-JANI, Dawood
ALAI, Amir Moayyed
ASGARPOUR, Behman
ASHIANI, Mohammad Fedai
ASHTIANI, Abbas Rezaee
ATOMIC ENERGY ORGANISATION OF IRAN (AEOI)
BAKHTIAR, Haleh
BEHZAD, Morteza
ESFAHAN NUCLEAR FUEL RESEARCH AND PRODUCTION CENTRE (NFRPC) AND ESFAHAN NUCLEAR TECHNOLOGY CENTRE (ENTC)
FIRST EAST EXPORT BANK, P.L.C.:
HOSSEINI, Seyyed Hussein
IRANO HIND SHIPPING COMPANY
IRISL BENELUX NV
JABBER IBN HAYAN
KARAJ NUCLEAR RESEARCH CENTRE
KAVOSHYAR COMPANY
LEILABADI, Ali Hajinia
MESBAH ENERGY COMPANY
MODERN INDUSTRIES TECHNIQUE COMPANY
MOHAJERANI, Hamid-Reza
MOHAMMADI, Jafar
MONAJEMI, Ehsan
NOBARI, Houshang
NOVIN ENERGY COMPANY
NUCLEAR RESEARCH CENTER FOR AGRICULTURE AND MEDICINE
PARS TRASH COMPANY
PISHGAM (PIONEER) ENERGY INDUSTRIES
QANNADI, Mohammad
RAHIMI, Amir
RAHIQI, Javad
RASHIDI, Abbas
SABET, M. Javad Karimi
SAFDARI, Seyed Jaber
SOLEYMANI, Ghasem
SOUTH SHIPPING LINE IRAN (SSL)
TAMAS COMPANY

ATTACHMENT 2 - PART I

LIST OF PERSONS, ENTITIES AND BODIES SET OUT IN ANNEX II TO COUNCIL DECISION 2010/413/CFSP AND ANNEX IX TO COUNCIL REGULATION (EU) NO 267/2012

AEROSPACE INDUSTRIES ORGANISATION, AIO
AL YASIN, Javad
ALUMINAT
ANSAR BANK
ARAN MODERN DEVICES
ARAS FARAYANDE
AREA PAINT COMPANY
ARFEH COMPANY
ARIA NIKAN,
ARMED FORCES GEOGRAPHICAL ORGANISATION
ASHTIAN TABLO
BABAEI, Davoud
BALS ALMAN
BANK SADERAT IRAN
BANK SADERAT PLC
BARGH AZARAKSH
BEHNAM SAHRIYARI TRADING COMPANY
BONYAD TAAVON SEPAH
BORBORUDI, Sayed Shamsuddin
DANESHJOO, Kamran
DARVISH-VAND, IRGC Brigadier-General Javad
ELECTRONIC COMPONENTS INDUSTRIES
ESNICO (EQUIPMENT SUPPLIER FOR NUCLEAR INDUSTRIES CORPORATION)
ETEMAD AMIN INVEST CO MOBIN
EYVAZ TECHNIC
FADAVI, Rear Admiral Ali
FAJR AVIATION COMPOSITE INDUSTRIES
FARAHI, IRGC Brigadier-General Seyyed Mahdi
FARASEPEHR ENGINEERING COMPANY
FATAH, Parviz
GHANI SAZI URANIUM COMPANY
HAERI, Engineer Mojtaba
HIRBOD CO
HOSEYNITASH, IRGC Brigadier-General Ali
HOSSEINI NEJAD TRADING CO.
INSTITUTE OF APPLIED PHYSICS
IRAN AIRCRAFT INDUSTRIES
IRAN AIRCRAFT MANUFACTURING COMPANY
IRAN CENTRIFUGE TECHNOLOGY COMPANY
IRAN COMMUNICATIONS INDUSTRIES
IRAN COMPOSITES INSTITUTE
IRAN ELECTRONICS INDUSTRIES
IRAN MARINE INDUSTRIAL COMPANY

IRAN POOYA
IRAN SAFFRON COMPANY OR IRANSAFFRON CO.
IRANIAN AVIATION INDUSTRIES ORGANIZATION
IRGC AIR FORCE
IRGC QODS FORCE
IRGC-AIR FORCE AL-GHADIR MISSILE COMMAND
ISFAHAN OPTICS
ISLAMIC REVOLUTIONARY GUARD CORPS
JAFARI, Milad
JAVEDAN MEHR TOOS
JELVESAZAN COMPANY
KARANIR
KARIMIAN, Ali
KHALA AFARIN PARS
KHANSARI, Majid
MAAA SYNERGY
MACPAR MAKINA SAN VE TIC
MAHMUDZADEH, Ebrahim
MARINE INDUSTRIES
MAROU SANAT
MATSA (MOHANDESI TOSEH SOKHT ATOMI COMPANY)
MECHANIC INDUSTRIES GROUP
MEHR BANK
MINISTRY OF DEFENSE AND SUPPORT FOR ARMED FORCES LOGISTICS
MOBIN SANJESH
MODERN TECHNOLOGIES FZC
MOHAMMADI, Mohammad
MOHAMMADLU, Brigadier-General Beik
MOVASAGHNIA, Mohammad Reza
MULTIMAT LC VE DIS TICARET PAZARLAMA LIMITED SIRKETI
NACCACHE, Anis
NADERI, Brigadier-General Mohammad
NAJJAR, IRGC Brigadier-General Mostafa Mohammad
NAQDI, BrigGen Mohammad Reza
NASERI, Mohammad Sadegh
NASERIN VAHID
NEDA INDUSTRIAL GROUP
NEKA NOVIN
NOAVARAN POOYAMOJ
NOURI, Ali Ashraf
OIL INDUSTRY PENSION FUND INVESTMENT COMPANY
ORGANISATION OF DEFENSIVE INNOVATION AND RESEARCH
PAKPUR, BrigGen Mohammad
PARCHIN CHEMICAL INDUSTRIES
PARTO SANAT CO
PASSIVE DEFENSE ORGANIZATION
PAYA PARTO
QASEMI, Rostam (a.k.a. Rostam GHASEMI)
RAAD IRAN
RAKA

RESEARCH CENTRE FOR EXPLOSION AND IMPACT
ROSMACHIN
SAIDI, Hojatoleslam Ali
SALAMI, BrigGen Hossein
SAMAN NASB ZAYENDEH ROOD; SAMAN NASBZAINDE ROOD
SAMAN TOSE'E ASIA
SAMEN INDUSTRIES
SCHILLER NOVIN
SEPANIR OIL AND GAS ENERGY ENGINEERING COMPANY
SHAFI'I RUDSARI, Rear Admiral Mohammad
SHAHID AHMAD KAZEMI INDUSTRIAL GROUP
SHAHID BEHESHTI UNIVERSITY
SHAKHESE BEHBUD SANAT
SHAMS, Abolghassem Mozaffari
SHAMSHIRI, IRGC Brigadier-General Ali
SHARIF UNIVERSITY OF TECHNOLOGY
SHETAB G.
SHETAB GAMAN
SHETAB TRADING
SHIRAZ ELECTRONICS INDUSTRIES
SIMATEC DEVELOPMENT COMPANY
SOLAT SANA, Abdollah
SOLTANI, Hamid
STATE PURCHASING ORGANISATION
STEP STANDART TEKNIK PARCA SAN VE TIC A.S.
SUN MIDDLE EAST FZ COMPANY
SURENA (A.K.A. SAKHD VA RAH-AN- DA-ZI)
TABA (IRAN CUTTING TOOLS MANUFACTURING COMPANY - TABA TOWLID ABZAR BORESHI IRAN)
TAGHTIRAN
TAJHIZ SANAT SHAYAN
TECHNOLOGY COOPERATION OFFICE OF THE IRANIAN PRESIDENT'S OFFICE
TEST TAFSIR
TIDEWATER
TOSSE SILOOHA
TURBINE ENGINEERING MANUFACTURING
VAHIDI, IRGC Brigadier-General Ahmad
WEST SUN TRADE GMBH
Y.A.S. CO. LTD
YARSANAT
YASA PART
ZADEH, Amir Ali Haji

ATTACHMENT 2 - PART II

LIST OF PERSONS, ENTITIES AND BODIES SET OUT IN ANNEX I TO COUNCIL DECISION 2010/413/CFSP AND ANNEXES VIII TO COUNCIL REGULATION (EU) NO 267/2012

7TH OF TIR.
ABBASI-DAVANI, Fereidoun
ABZAR BORESH KAVEH CO.
AGHAJANI, Azim
AHMADIAN, Ali Akbar
AMIN INDUSTRIAL COMPLEX
AMMUNITION AND METALLURGY INDUSTRIES GROUP
ARMAMENT INDUSTRIES GROUP
BAHMANYAR, Bahmanyar Morteza
BANK SEPAH
BANK SEPAH INTERNATIONAL
BARZAGANI TEJARAT TAVANMAD SACCAL COMPANIES
BEHINEH TRADING CO.
CRUISE MISSILE INDUSTRY GROUP
DASTJERDI, Ahmad Vahid
DEFENCE INDUSTRIES ORGANISATION (DIO)
DEFENSE TECHNOLOGY AND SCIENCE RESEARCH CENTER
DERAKHSHANDEH, Ahmad
DOOSTAN INTERNATIONAL COMPANY
ELECTRO SANAM COMPANY
ESLAMI, Mohammad
ESMAELI, Reza-Gholi
ETTEHAD TECHNICAL GROUP
FAJR INDUSTRIAL GROUP
FAKHRIZADEH-MAHABADI, Mohsen
FARASAKHT INDUSTRIES
FARAYAND TECHNIQUE
FATER (OR FAATER) INSTITUTE
GHARAGAHE SAZANDEGI GHAEM
GHORB KARBALA
GHORB NOOH
HARA COMPANY
HEJAZI, Mohammad
HOJATI, Mohsen
IMENSAZAN CONSULTANT ENGINEERS INSTITUTE
INDUSTRIAL FACTORIES OF PRECISION (IFP) MACHINERY
JOZA INDUSTRIAL CO.
KALA-ELECTRIC
KAVEH CUTTING TOOLS COMPANY
KETABACHI, Mehrdada Akhlaghi
KHATAM AL-ANBIYA CONSTRUCTION HEADQUARTERS
KHORASAN METALLURGY INDUSTRIES
M. BABAIE INDUSTRIES
MAKIN

MALEK ASHTAR UNIVERSITY
MALEKI, Naser
MINISTRY OF DEFENSE LOGISTICS EXPORT
MIZAN MACHINERY MANUFACTURING A.K.A.: 3MG
NAQDI, Mohammad Reza
NEJAD NOURI, Mohammad Mehdi
NIRU BATTERY MANUFACTURING COMPANY
OMRAN SAHEL
ORIENTAL OIL KISH
PARCHIN CHEMICAL INDUSTRIES
PARS AVIATION SERVICES COMPANY
PEJMAN INDUSTRIAL SERVICES CORPORATION
QODS AERONAUTICS INDUSTRIES
RAH SAHEL
RAHAB ENGINEERING INSTITUTE
REZAIE, Morteza
SABALAN COMPANY
SAD IMPORT EXPORT COMPANY
SAFARI, Morteza
SAFAVI, Yahya Rahim
SAFETY EQUIPMENT PROCUREMENT (SEP)
SAHAND ALUMINUM PARTS INDUSTRIAL COMPANY
SAHEL CONSULTANT ENGINEERS
SALIMI, Hosein
SANAM INDUSTRIAL GROUP
SEPANIR
SEPASAD ENGINEERING COMPANY
SHAHID BAGHERI INDUSTRIAL GROUP (SBIG)
SHAHID HEMMAT INDUSTRIAL GROUP (SHIG)
SHAHID KARRAZI INDUSTRIES
SHAHID SATARRI INDUSTRIES
SHAHID SAYYADE SHIRAZI INDUSTRIES
SHO'A' AVIATION.
SOLEIMANI, Qasem
SPECIAL INDUSTRIES GROUP
TABATABAEI, Ali Akbar
TIZ PARS
YA MAHDI INDUSTRIES GROUP
YAS AIR
YAZD METALLURGY INDUSTRIES
ZAHEDI, Mohammad Reza
ZOLQADR, General

ATTACHMENT 3

IRANIAN FINANCIAL INSTITUTIONS AND INDIVIDUAL AND ENTITIES IDENTIFIED AS GOVERNMENT OF IRAN (GOI) ON THE SDN LIST; DESIGNATED ENTITIES AND INDIVIDUALS ON THE SDN LIST AND ENTITIES AND INDIVIDUALS LISTED ON THE FSE LIST; INDIVIDUALS AND ENTITIES SANCTIONED UNDER ISA; BLOCKED PROPERTY OF THE FOREGOING

AA ENERGY FZCO*
ABAN AIR
ADVANCE NOVEL LIMITED
AFZALI, Ali
AGHA-JANI, Dawood
AL AQILI GROUP LLC
AL AQILI, Mohamed Saeed
AL FIDA INTERNATIONAL GENERAL TRADING
AL HILAL EXCHANGE
ALPHA EFFORT LIMITED
AMERI, Teymour
AMIN INVESTMENT BANK*
ANTARES SHIPPING COMPANY NV
ARASH SHIPPING ENTERPRISES LIMITED*
ARIAN BANK
ARTA SHIPPING ENTERPRISES LIMITED*
ASAN SHIPPING ENTERPRISE LIMITED*
ASCOTEC HOLDING GMBH*
ASCOTEC JAPAN K.K.*
ASCOTEC MINERAL & MACHINERY GMBH*
ASCOTEC SCIENCE & TECHNOLOGY GMBH*
ASCOTEC STEEL TRADING GMBH*
ASHTEAD SHIPPING COMPANY LIMITED
ASIA BANK
ASIA ENERGY GENERAL TRADING (LLC)*
ASIA MARINE NETWORK PTE. LTD.
ASSA CO. LTD.
ASSA CORP.
ATLANTIC INTERMODAL
ATOMIC ENERGY ORGANIZATION OF IRAN
AZORES SHIPPING COMPANY LL FZE
BAHADORI, Masoud*
BANCO INTERNACIONAL DE DESARROLLO, C.A.
BANDAR IMAM PETROCHEMICAL COMPANY*
BANK KARGOSHAEE
BANK KESHAVARZI IRAN*

* Denotes Iranian financial institutions and individuals and entities identified as GOI by the Office of Foreign Assets Control (OFAC). U.S. persons and foreign entities owned or controlled by a U.S. person will continue to be prohibited from transactions with these individuals and entities, pursuant to the Iranian Transactions and Sanctions Regulations.

BANK MARKAZI JOMHOURI ISLAMI IRAN*
BANK MASKAN*
BANK MELLAT*
BANK MELLI IRAN INVESTMENT COMPANY
BANK MELLI IRAN*
BANK MELLI PRINTING AND PUBLISHING CO.
BANK OF INDUSTRY AND MINE (OF IRAN)*
BANK REFAH KARGARAN*
BANK SEPAH INTERNATIONAL PLC
BANK SEPAH*
BANK TEJARAT*
BANK TORGOVOY KAPITAL ZAO*
BANK-E SHAHR*
BATENI, Naser
BAZARGAN, Farzad*
BEHSAZ KASHANE TEHRAN CONSTRUCTION CO.*
BEHZAD, Morteza Ahmadali
BELFAST GENERAL TRADING LLC
BEST PRECISE LIMITED
BHS MARITIME LIMITED
BIMEH IRAN INSURANCE COMPANY (U.K.) LIMITED*
BLUE TANKER SHIPPING SA*
BMIIC INTERNATIONAL GENERAL TRADING LTD
BOU ALI SINA PETROCHEMICAL COMPANY*
BREYELLER STAHL TECHNOLOGY GMBH & CO. KG*
BUSHEHR SHIPPING COMPANY LIMITED
BYFLEET SHIPPING COMPANY LIMITED
CAMBIS, Dimitris*
CASPIAN MARITIME LIMITED*
CAUCASUS ENERGY
CEMENT INVESTMENT AND DEVELOPMENT COMPANY
CENTRAL INSURANCE OF IRAN
CISCO SHIPPING COMPANY CO. LTD.
COBHAM SHIPPING COMPANY LIMITED
COMMERCIAL PARS OIL CO.*
CONCEPT GIANT LIMITED
CREDIT INSTITUTION FOR DEVELOPMENT*
CRYSTAL SHIPPING FZE
CYLINDER SYSTEM L.T.D.*
DAJMAR, Mohhammad Hossein
DANESH SHIPPING COMPANY LIMITED*
DARYA CAPITAL ADMINISTRATION GMBH
DAVAR SHIPPING CO LTD*
DENA TANKERS FZE*
DERAKHSHANDEH, AHMAD
DETTIN SPA
DEY BANK*
DFS WORLDWIDE
DIVANDARI, Ali
DORKING SHIPPING COMPANY LIMITED

EDBI EXCHANGE COMPANY
EDBI STOCK BROKERAGE COMPANY
EFFINGHAM SHIPPING COMPANY LIMITED
EGHTESAD NOVIN BANK*
EIGHTH OCEAN ADMINISTRATION GMBH
EIGHTH OCEAN GMBH & CO. KG
ELEVENTH OCEAN ADMINISTRATION GMBH
ELEVENTH OCEAN GMBH & CO. KG
ESFAHAN NUCLEAR FUEL RESEARCH AND PRODUCTION CENTER
ESLAMI, Mansour
EUROPAISCH-IRANISCHE HANDELSBANK AG*
EUROPEAN OIL TRADERS
EVEREX
EXECUTION OF IMAM KHOMEINI'S ORDER*
EXPORT DEVELOPMENT BANK OF IRAN*
EZATI, Ali
FAIRWAY SHIPPING LTD
FAL OIL COMPANY LIMITED
FARNHAM SHIPPING COMPANY LIMITED
FARSOUDEH, Houshang
FAYLACA PETROLEUM
FERLAND COMPANY LIMITED
FIFTEENTH OCEAN GMBH & CO. KG
FIFTH OCEAN ADMINISTRATION GMBH
FIFTH OCEAN GMBH & CO. KG
FIRST EAST EXPORT BANK, P.L.C.
FIRST ISLAMIC INVESTMENT BANK LTD.
FIRST OCEAN ADMINISTRATION GMBH
FIRST OCEAN GMBH & CO. KG
FIRST PERSIA EQUITY FUND
FOURTEENTH OCEAN GMBH & CO. KG
FOURTH OCEAN ADMINISTRATION GMBH
FOURTH OCEAN GMBH & CO. KG
FUTURE BANK B.S.C.*
GALLIOT MARITIME INC
GARBIN NAVIGATION LTD*
GEORGIAN BUSINESS DEVELOPMENT
GHADIR INVESTMENT COMPANY*
GHAED BASSIR PETROCHEMICAL PRODUCTS COMPANY*
GHALEBANI, Ahmad*
GHARZOLHASANEH RESALAT BANK*
GHAVAMIN BANK*
GHEZEL AYAGH, Alireza
GOLDEN RESOURCES TRADING COMPANY L.L.C.*
GOLDENTEX FZE
GOLPARVAR, Gholamhossein
GOMSHALL SHIPPING COMPANY LIMITED
GOOD LUCK SHIPPING L.L.C.
GRACE BAY SHIPPING INC*
GREAT BUSINESS DEALS

GREAT METHOD LIMITED
HADI SHIPPING COMPANY LIMITED*
HAFIZ DARYA SHIPPING CO
HARAZ SHIPPING COMPANY LIMITED*
HATEF SHIPPING COMPANY LIMITED*
HEKMAT IRANIAN BANK*
HERCULES INTERNATIONAL SHIP*
HERMIS SHIPPING SA*
HIRMAND SHIPPING COMPANY LIMITED*
HODA SHIPPING COMPANY LIMITED*
HOMA SHIPPING COMPANY LIMITED*
HONAR SHIPPING COMPANY LIMITED*
HONG KONG INTERTRADE COMPANY*
HORMOZ OIL REFINING COMPANY*
HORSHAM SHIPPING COMPANY LIMITED
HOSSEINPOUR, Houshang
HTTS HANSEATIC TRADE TRUST AND SHIPPING, GMBH
IDEAL SUCCESS INVESTMENTS LIMITED
IFIC HOLDING AG*
IHAG TRADING GMBH*
IMPIRE SHIPPING COMPANY*
INDUS MARITIME INC
INDUSTRIAL DEVELOPMENT AND RENOVATION ORGANIZATION OF IRAN*
INTERNATIONAL SAFE OIL
INTRA CHEM TRADING GMBH*
IRAN & SHARGH COMPANY*
IRAN & SHARGH LEASING COMPANY*
IRAN AIR
IRAN FOREIGN INVESTMENT COMPANY*
IRAN INSURANCE COMPANY*
IRAN O HIND SHIPPING COMPANY
IRAN O MISR SHIPPING COMPANY
IRAN PETROCHEMICAL COMMERCIAL COMPANY*
IRAN ZAMIN BANK*
IRANAIR TOURS
IRANIAN MINES AND MINING INDUSTRIES DEVELOPMENT AND RENOVATION ORGANIZATION*
IRANIAN OIL COMPANY (U.K.) LIMITED*
IRANIAN-VENEZUELAN BI-NATIONAL BANK / JOINT IRAN-VENEZUELA BANK*
IRASCO S.R.L.*
IRINVESTSHIP LTD.
IRISL (MALTA) LIMITED
IRISL (UK) LTD.
IRISL CHINA SHIPPING CO., LTD.
IRISL EUROPE GMBH
IRISL MARINE SERVICES & ENGINEERING COMPANY
IRISL MULTIMODAL TRANSPORT CO.
IRITAL SHIPPING SRL COMPANY

ISI MARITIME LIMITED
ISIM AMIN LIMITED
ISIM ATR LIMITED
ISIM OLIVE LIMITED
ISIM SAT LIMITED
ISIM SEA CHARIOT LIMITED
ISIM SEA CRESCENT LIMITED
ISIM SININ LIMITED
ISIM TAJ MAHAL LIMITED
ISIM TOUR LIMITED
ISLAMIC REGIONAL COOPERATION BANK*
ISLAMIC REPUBLIC OF IRAN SHIPPING LINES
JABBER IBN HAYAN
JAM PETROCHEMICAL COMPANY
JASHNSAZ, Seifollah*
JUPITER SEAWAYS SHIPPING*
KADDOURI, Abdelhak
KAFOLATBANK*
KALA LIMITED*
KALA PENSION TRUST LIMITED*
KARAFARIN BANK*
KASB INTERNATIONAL LLC*
KAVERI MARITIME INC
KAVOSHYAR COMPANY
KERMAN SHIPPING CO LTD
KHALILI, Jamshid
KHAVARMIANEH BANK*
KHAZAR SEA SHIPPING LINES
KISH INTERNATIONAL BANK*
KISH PROTECTION & INDEMNITY
KONING MARINE CORP*
KONT INVESTMENT BANK
KONT KOSMETIK
KSN FOUNDATION
KUO OIL PTE. LTD
LANCELIN SHIPPING COMPANY LIMITED
LEADING MARITIME PTE. LTD.
LEILABADI, Ali Hajinia
LISSOME MARINE SERVICES LLC
LOGISTIC SMART LIMITED
LOWESWATER LIMITED
MACHINE SAZI ARAK CO. LTD.*
MAHAB GHODSS CONSULTING ENGINEERING COMPANY*
MAHDAVI, Ali
MALSHIP SHIPPING AGENCY LTD.
MARANER HOLDINGS LIMITED
MARBLE SHIPPING LIMITED
MARJAN PETROCHEMICAL COMPANY*
MAZANDARAN CEMENT COMPANY
MAZANDARAN TEXTILE COMPANY

MCS ENGINEERING*
MCS INTERNATIONAL GMBH*
MEHR CAYMAN LTD.
MEHR IRAN CREDIT UNION BANK*
MEHRAN SHIPPING COMPANY LIMITED*
MELLAT BANK SB CJSC
MELLAT INSURANCE COMPANY*
MELLI AGROCHEMICAL COMPANY, P.J.S.
MELLI BANK PLC
MELLI INVESTMENT HOLDING INTERNATIONAL
MELODIOUS MARITIME INC
MERSAD SHIPPING COMPANY LIMITED*
MESBAH ENERGY COMPANY
METAL & MINERAL TRADE S.A.R.L.*
MID OIL ASIA PTE LTD
MILL DENE LIMITED
MINAB SHIPPING COMPANY LIMITED*
MINES AND METALS ENGINEERING GMBH*
MIR BUSINESS BANK ZAO
MOALLEM INSURANCE COMPANY
MOBIN PETROCHEMICAL COMPANY*
MODABER*
MODALITY LIMITED
MOGHADDAMI FARD, Mohammad
MOHADDES, Seyed Mahmoud*
MOINIE, Mohammad*
MONSOON SHIPPING LTD*
MOUNT EVEREST MARITIME INC
MSP KALA NAFT CO. TEHRAN*
N.I.T.C. REPRESENTATIVE OFFICE*
NABIPOUR, Ghasem
NAFTIRAN INTERTRADE CO. (NICO) LIMITED*
NAFTIRAN INTERTRADE CO. (NICO) SARL*
NAFTIRAN TRADING SERVICES CO. (NTS) LIMITED*
NARI SHIPPING AND CHARTERING GMBH & CO. KG
NASIRBEIK, Anahita
NATIONAL IRANIAN OIL COMPANY PTE LTD*
NATIONAL IRANIAN OIL COMPANY*
NATIONAL IRANIAN TANKER COMPANY LLC*
NATIONAL IRANIAN TANKER COMPANY*
NATIONAL PETROCHEMICAL COMPANY*
NAYEBI, Pourya
NEFERTITI SHIPPING COMPANY
NEUMAN LIMITED
NEW DESIRE LIMITED
NEW YORK GENERAL TRADING
NEW YORK MONEY EXCHANGE
NICO ENGINEERING LIMITED*
NIKOUSOKHAN, Mahmoud*
NIKSIMA FOOD AND BEVERAGE JLT

NINTH OCEAN ADMINISTRATION GMBH
NINTH OCEAN GMBH & CO. KG
NIOC INTERNATIONAL AFFAIRS (LONDON) LIMITED*
NIZAMI, Anwar Kamal
NOOR AFZAR GOSTAR COMPANY
NOOR ENERGY (MALAYSIA) LTD.*
NOURI PETROCHEMICAL COMPANY*
NOVIN ENERGY COMPANY
NPC INTERNATIONAL LIMITED*
NUCLEAR RESEARCH CENTER FOR AGRICULTURE AND MEDICINE
NUCLEAR SCIENCE AND TECHNOLOGY RESEARCH INSTITUTE
OCEAN CAPITAL ADMINISTRATION GMBH
OIL INDUSTRY INVESTMENT COMPANY*
OMID REY CIVIL & CONSTRUCTION COMPANY*
ONE CLASS PROPERTIES (PTY) LTD.*
ONE VISION INVESTMENTS 5 (PTY) LTD.*
ONERBANK ZAO*
ORCHIDEA GULF TRADING
P.C.C. (SINGAPORE) PRIVATE LIMITED*
PACIFIC SHIPPING DMCEST
PAJAND, Mohammad Hadi
PARDIS INVESTMENT COMPANY*
PARS MCS*
PARS OIL AND GAS COMPANY*
PARS OIL CO.*
PARS PETROCHEMICAL COMPANY*
PARS PETROCHEMICAL SHIPPING COMPANY*
PARS TRASH COMPANY
PARSAEI, Reza*
PARSIAN BANK*
PARTNER CENTURY LIMITED
PARVARESH, Farhad Ali
PASARGAD BANK*
PEARL ENERGY COMPANY LTD.
PEARL ENERGY SERVICES, SA
PERSIA INTERNATIONAL BANK PLC
PERSIA OIL & GAS INDUSTRY DEVELOPMENT CO.*
PETRO ENERGY INTERTRADE COMPANY*
PETRO ROYAL FZE*
PETRO SUISSE INTERTRADE COMPANY SA*
PETROCHEMICAL COMMERCIAL COMPANY (U.K.) LIMITED*
PETROCHEMICAL COMMERCIAL COMPANY FZE*
PETROCHEMICAL COMMERCIAL COMPANY INTERNATIONAL*
PETROIRAN DEVELOPMENT COMPANY (PEDCO) LIMITED*
PETROLEOS DE VENEZUELA S.A. (PDVSA)
PETROPARS INTERNATIONAL FZE*
PETROPARS LTD.*
PETROPARS UK LIMITED*
PIONEER ENERGY INDUSTRIES COMPANY
POLAT, Muzaffer

POLINEX GENERAL TRADING LLC*
POLYNAR COMPANY*
POST BANK OF IRAN*
POURANSARI, Hashem*
PROTON PETROCHEMICALS SHIPPING LIMITED*
PRYVATNE AKTSIONERNE TOVARYSTVO AVIAKOMPANIYA BUKOVYNA
QANNADI, Mohammad
QULANDARY, Azizullah Asadullah
RAHIQI, Javad
RASOOL, Seyed Alaeddin Sadat
REY INVESTMENT COMPANY*
REY NIRU ENGINEERING COMPANY*
REYCO GMBH.*
REZVANIANZADEH, Mohammed Reza
RISHI MARITIME INC
RISHMAK PRODUCTIVE & EXPORTS COMPANY*
ROYAL ARYA CO.*
ROYAL OYSTER GROUP
ROYAL-MED SHIPPING AGENCY LTD
SABET, Javad Karimi
SACKVILLE HOLDINGS LIMITED
SADAF PETROCHEMICAL ASSALUYEH COMPANY*
SAFDARI, Seyed Jaber
SAFIRAN PAYAM DARYA SHIPPING COMPANY
SAMAN BANK*
SAMAN SHIPPING COMPANY LIMITED*
SAMBOUK SHIPPING FZC*
SANDFORD GROUP LIMITED
SANTEX LINES LIMITED
SARKANDI, Ahmad
SARMAYEH BANK*
SARV SHIPPING COMPANY LIMITED*
SECOND OCEAN ADMINISTRATION GMBH
SECOND OCEAN GMBH & CO. KG
SEIBOW LIMITED
SEIBOW LOGISTICS LIMITED
SEIFI, Asadollah
SEPID SHIPPING COMPANY LIMITED*
SEVENTH OCEAN ADMINISTRATION GMBH
SEVENTH OCEAN GMBH & CO. KG
SEYYEDI, Seyed Nasser Mohammad*
SEYYEDI, Seyedeh Hanieh Seyed Nasser Mohammad
SHAHID TONDGOOYAN PETROCHEMICAL COMPANY*
SHALLON LIMITED
SHAZAND PETROCHEMICAL COMPANY*
SHERE SHIPPING COMPANY LIMITED
SHIPPING COMPUTER SERVICES COMPANY
SHOMAL CEMENT COMPANY
SIMA GENERAL TRADING CO FZE*
SIMA SHIPPING COMPANY LIMITED*

SINA BANK*
SINA SHIPPING COMPANY LIMITED*
SINGA TANKERS PTE. LTD.
SINO ACCESS HOLDINGS LIMITED
SINOSE MARITIME PTE. LTD.
SIQIRIYA MARITIME CORP.
SIXTH OCEAN ADMINISTRATION GMBH
SIXTH OCEAN GMBH & CO. KG
SMART DAY HOLDINGS GROUP LIMITED
SOKOLENKO, Vitaly
SORINET COMMERCIAL TRUST (SCT) BANKERS
SOROUSH SARZAMIN ASATIR SHIP MANAGEMENT COMPANY
SOUTH SHIPPING LINE IRAN
SPEEDY SHIP FZC
SPRINGTHORPE LIMITED
STARRY SHINE INTERNATIONAL LIMITED
SWISS MANAGEMENT SERVICES SARL*
SYNERGY GENERAL TRADING FZE*
SYSTEM WISE LIMITED
TABATABAEI, Seyyed Mohammad Ali Khatibi*
TABRIZ PETROCHEMICAL COMPANY*
TADBIR BROKERAGE COMPANY*
TADBIR CONSTRUCTION DEVELOPMENT COMPANY*
TADBIR ECONOMIC DEVELOPMENT GROUP*
TADBIR ENERGY DEVELOPMENT GROUP CO.*
TADBIR INVESTMENT COMPANY*
TAFAZOLI, Ahmad
TALAI, Mohamad
TAMAS COMPANY
TAT BANK*
TC SHIPPING COMPANY LIMITED*
TENTH OCEAN GMBH & CO. KG
THE EXPLORATION AND NUCLEAR RAW MATERIALS PRODUCTION COMPANY
THE NUCLEAR REACTORS FUEL COMPANY
THIRD OCEAN ADMINISTRATION GMBH
THIRD OCEAN GMBH & CO. KG
THIRTEENTH OCEAN GMBH & CO. KG
TONGHAM SHIPPING CO LTD
TOP GLACIER COMPANY LIMITED
TOP PRESTIGE TRADING LIMITED
TOSEE EQTESAD AYANDEHSAZAN COMPANY*
TOSEE TAAVON BANK*
TOURISM BANK*
TRADE TREASURE LIMITED
TRUE HONOUR HOLDINGS LIMITED
TWELFTH OCEAN ADMINISTRATION GMBH
TWELFTH OCEAN GMBH & CO. KG
UPPERCOURT SHIPPING COMPANY LIMITED
VALFAJR 8TH SHIPPING LINE CO SSK

VOBSTER SHIPPING COMPANY LTD
WEST SUN TRADE GMBH*
WIPPERMANN, Ulrich
WOKING SHIPPING INVESTMENTS LIMITED
YASINI, Seyed Kamal
YAZDI, Bahareh Mirza Hossein
ZADEH, Hassan Jalil
ZANJANI, Babak Morteza
ZARIN RAFSANJAN CEMENT COMPANY*
ZEIDI, Hossein
ZHUHAI ZHENRONG COMPANY
ZIRACCHIAN ZADEH, Mahmoud*

BLOCKED PROPERTY	PROPERTY OF	TYPE	IMO NUMBER
EP-CFD	IRAN AIR	Aircraft	
EP-CFL	IRAN AIR	Aircraft	
EP-CFH	IRAN AIR	Aircraft	
EP-CFI	IRAN AIR	Aircraft	
EP-CFJ	IRAN AIR	Aircraft	
EP-CFK	IRAN AIR	Aircraft	
EP-CFL	IRAN AIR	Aircraft	
EP-CFM	IRAN AIR	Aircraft	
EP-CFO	IRAN AIR	Aircraft	
EP-CFP	IRAN AIR	Aircraft	
EP-CFQ	IRAN AIR	Aircraft	
EP-CFR	IRAN AIR	Aircraft	
EP-IAA	IRAN AIR	Aircraft	
EP-IAB	IRAN AIR	Aircraft	
EP-IAC	IRAN AIR	Aircraft	
EP-IAD	IRAN AIR	Aircraft	
EP-IAG	IRAN AIR	Aircraft	
EP-IAH	IRAN AIR	Aircraft	
EP-IAI	IRAN AIR	Aircraft	
EP-IAM	IRAN AIR	Aircraft	
EP-IBA	IRAN AIR	Aircraft	
EP-IBB	IRAN AIR	Aircraft	
EP-IBC	IRAN AIR	Aircraft	
EP-IBD	IRAN AIR	Aircraft	
EP-IBG	IRAN AIR	Aircraft	
EP-IBH	IRAN AIR	Aircraft	
EP-IBI	IRAN AIR	Aircraft	
EP-IBJ	IRAN AIR	Aircraft	
EP-IBK	IRAN AIR	Aircraft	
EP-IBL	IRAN AIR	Aircraft	
EP-IBM	IRAN AIR	Aircraft	
EP-IBN	IRAN AIR	Aircraft	
EP-IBP	IRAN AIR	Aircraft	
EP-IBQ	IRAN AIR	Aircraft	
EP-IBS	IRAN AIR	Aircraft	
EP-IBT	IRAN AIR	Aircraft	
EP-IBV	IRAN AIR	Aircraft	
EP-IBZ	IRAN AIR	Aircraft	
EP-ICD	IRAN AIR	Aircraft	
EP-ICE	IRAN AIR	Aircraft	
EP-ICF	IRAN AIR	Aircraft	
EP-IDA	IRAN AIR	Aircraft	

* Denotes blocked property of individual and entities identified as GOI by the Office of Foreign Assets Control. U.S. persons and foreign entities owned or controlled by a U.S. person will continue to be prohibited from transactions with these individuals and entities, pursuant to the Iranian Transactions and Sanctions Regulations.

EP-IDD	IRAN AIR	Aircraft	
EP-IDF	IRAN AIR	Aircraft	
EP-IDG	IRAN AIR	Aircraft	
EP-IEB	IRAN AIR	Aircraft	
EP-IEC	IRAN AIR	Aircraft	
EP-IED	IRAN AIR	Aircraft	
EP-IEE	IRAN AIR	Aircraft	
EP-IEF	IRAN AIR	Aircraft	
EP-IEG	IRAN AIR	Aircraft	
EP-IRK	IRAN AIR	Aircraft	
EP-IRL	IRAN AIR	Aircraft	
EP-IRM	IRAN AIR	Aircraft	
EP-IRN	IRAN AIR	Aircraft	
EP-IRR	IRAN AIR	Aircraft	
EP-IRS	IRAN AIR	Aircraft	
EP-IRT	IRAN AIR	Aircraft	
EP-MDD	IRAN AIR	Aircraft	
EP-MDE	IRAN AIR	Aircraft	
UR-BXI	IRAN AIR	Aircraft	
UR-BXL	IRAN AIR	Aircraft	
UR-BXM	IRAN AIR	Aircraft	
UR-CGS	IRAN AIR	Aircraft	
UR-CGT	IRAN AIR	Aircraft	
UR-CHW	IRAN AIR	Aircraft	
UR-CHX	IRAN AIR	Aircraft	
UR-CHY	IRAN AIR	Aircraft	
UR-CHZ	IRAN AIR	Aircraft	
UR-CJQ	IRAN AIR	Aircraft	
UR-BHJ	PRYVATNE AKTSIONERNE TOVARYSTVO AVIAKOMPANIYA	Aircraft	
UR-BXN	PRYVATNE AKTSIONERNE TOVARYSTVO AVIAKOMPANIYA	Aircraft	
UR-CIX	PRYVATNE AKTSIONERNE TOVARYSTVO AVIAKOMPANIYA	Aircraft	
UR-CIY	PRYVATNE AKTSIONERNE TOVARYSTVO AVIAKOMPANIYA	Aircraft	
UR-CJA	PRYVATNE AKTSIONERNE TOVARYSTVO AVIAKOMPANIYA	Aircraft	
UR-CJK	PRYVATNE AKTSIONERNE TOVARYSTVO AVIAKOMPANIYA	Aircraft	
RIONA	HAFIZ DARYA SHIPPING CO	Vessel	9349588
MIRZA KOCHEK KHAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	7027899
ASSA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	7632814
AMITEES	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	7632826
HORMUZ 2	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	7904580
PARMIDA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8105284
BARSAM	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8107581
PANTEA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8108559

IRAN AKHAVAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8113009
SARINA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8203608
SABRINA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8215742
ATTRIBUTE	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309593
ALIAS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309608
AQUARIAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309610
ADVENTIST	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309622
AGEAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309634
ANGEL	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309646
AGILE	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309658
AJAX	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309672
ACROBAT	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309684
SHADFAR	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309696
AMPLIFY	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8309701
IRAN HORMUZ 21	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8314263
IRAN HORMUZ 22	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8314275
IRAN HORMUZ 23	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8319782
IRAN SHALAK	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8319940
IRAN YOUSHAT	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8319952
AEROLITE	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8320121
ADRIAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8320133
NAGHMEH	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8320145
RONAK	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8320157
ACCURATE	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8320169
TABANDEH	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8320171
GULAFSHAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8320183
ALAMEDA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8320195
IRAN PARAK	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8322064
IRAN CHARAK	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8322076
IRAN HORMUZ 25	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8422072
IRAN HORMUZ 26	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8422084
DORITA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8605234
IRAN SHALAMCHEH	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8820925
AAJ	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	8984484
IRAN HORMUZ 12	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9005596
IRAN KONG	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9007582
VISTA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9010711
VIANA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9010723
IRAN HORMUZ 14	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9020778
HAMD	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9036052
SOBHAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9036935
SATTAR	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9040479
ABBA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9051624
BEHDAD	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9051636
PARSHAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9051648
VALERIAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9051650
NEGEEN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9071519
ATTAR	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9074092

PARIN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9076478
TEEN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9101649
GOWHAR	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9103087
IRAN DALEER	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9118551
PATRIS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9137210
NARDIS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9137246
KADOS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9137258
ZOMOROUD	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9138044
BRELYAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9138056
NILDA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9165786
JOVITA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9165798
MANOLA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9165803
GLADIOLUS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9165815
ELYANA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9165827
NEGAR	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9165839
SAVIZ	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9167253
GLOXINIA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9167265
NESHAT	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9167277
BEHSHAD	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9167289
JAIRAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9167291
IRAN SHAHED	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9184691
GOLSAR	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9193185
ZARSAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9193197
ARVIN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9193202
ARTAVAND	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9193214
TERESA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9209324
GABRIELA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9209336
SARITA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9209348
SILVER CRAFT	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9209350
MAHNAM	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9213387
TERMEH	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9213399
MAHSAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9226944
HAMADAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9226956
TARADIS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9245304
PARMIS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9245316
ZAR	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9260160
ZIVAR	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9260172
VALILI	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9270646
SHAMIM	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9270658
IRAN SHAHR-E-KORD	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9270684
IRAN KASHAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9270696
SININ	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9274941
PARMIS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9283007
AZARGOUN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9283019
SALIS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9283021
GOLBON	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9283033
PARDIS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9284142
TANDIS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9284154

SHERE	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9305192
UPPERCOURT	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9305207
TONGHAM	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9305219
VOBSTER	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9305221
GOLAFRUZ	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9323833
ADALIA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9328900
SHABGOUN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9346524
AGATA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9346536
BENITA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9346548
MARISOL	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9349576
ORIANA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9349590
MERCEDES	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9349667
RAMONA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9349679
GILDA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9367982
SANIA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9367994
SARIR	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9368003
SOMIA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9368015
GLORY	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9369710
ARIES	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9369722
ABTIN 1	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9379636
ARSHAM	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9386500
PARSHAD	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9387786
HAADI	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9387798
RAAZI	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9387803
SAEI	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9387815
ARTMAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9405930
BASKAR	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9405942
BAHJAT	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9405954
HAAMI	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9405966
SHAADI	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9405978
SHAYAN 1	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9420356
TABAN 1	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9420368
YARAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9420370
AMIN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9422366
AVANG	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9465746
KIAZAND	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9465758
BATIS	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9465760
WARTA	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9465849
SALIM	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9465851
ARDAVAN	ISLAMIC REPUBLIC OF IRAN SHIPPING LINES	Vessel	9465863
NAMI	LISSOME MARINE SERVICES LLC	Vessel	8419178
GAS CAMELLIA	LISSOME MARINE SERVICES LLC	Vessel	8803381
TESS	LISSOME MARINE SERVICES LLC	Vessel	8913564
KATERINA I	LISSOME MARINE SERVICES LLC	Vessel	9031959
MARIA	LISSOME MARINE SERVICES LLC	Vessel	9110626
SUN OCEAN	LISSOME MARINE SERVICES LLC	Vessel	9408358
YOUNES	NATIONAL IRANIAN TANKER COMPANY	Vessel	8212465
YOUSEF	NATIONAL IRANIAN TANKER COMPANY	Vessel	8316106

YAGHOUB	NATIONAL IRANIAN TANKER COMPANY	Vessel	8316168
TOLOU	NATIONAL IRANIAN TANKER COMPANY	Vessel	8318178
VALFAJR2	NATIONAL IRANIAN TANKER COMPANY	Vessel	8400103
BADR	NATIONAL IRANIAN TANKER COMPANY	Vessel	8407345
BANEH	NATIONAL IRANIAN TANKER COMPANY	Vessel	8508462
SARDASHT	NATIONAL IRANIAN TANKER COMPANY	Vessel	8517231
MARIVAN	NATIONAL IRANIAN TANKER COMPANY	Vessel	8517243
BRIGHT	NATIONAL IRANIAN TANKER COMPANY	Vessel	9005235
CARIBO	NATIONAL IRANIAN TANKER COMPANY	Vessel	9011246
AURA	NATIONAL IRANIAN TANKER COMPANY	Vessel	9013749
BICAS	NATIONAL IRANIAN TANKER COMPANY	Vessel	9077850
MAHARLIKA	NATIONAL IRANIAN TANKER COMPANY	Vessel	9079066
NAPOLI	NATIONAL IRANIAN TANKER COMPANY	Vessel	9079078
NYOS	NATIONAL IRANIAN TANKER COMPANY	Vessel	9079080
NAINITAL	NATIONAL IRANIAN TANKER COMPANY	Vessel	9079092
NATIVE LAND	NATIONAL IRANIAN TANKER COMPANY	Vessel	9079107
ATLANTIC	NATIONAL IRANIAN TANKER COMPANY	Vessel	9107655
SPARROW	NATIONAL IRANIAN TANKER COMPANY	Vessel	9171450
SWALLOW	NATIONAL IRANIAN TANKER COMPANY	Vessel	9171462
SUPERIOR	NATIONAL IRANIAN TANKER COMPANY	Vessel	9172038
SPOTLESS	NATIONAL IRANIAN TANKER COMPANY	Vessel	9172040
SABRINA	NATIONAL IRANIAN TANKER COMPANY	Vessel	9172052
DESTINY	NATIONAL IRANIAN TANKER COMPANY	Vessel	9177155
HUMANITY	NATIONAL IRANIAN TANKER COMPANY	Vessel	9180281
ORIENTAL	NATIONAL IRANIAN TANKER COMPANY	Vessel	9183934
SHONA	NATIONAL IRANIAN TANKER COMPANY	Vessel	9187629
ABELIA	NATIONAL IRANIAN TANKER COMPANY	Vessel	9187631
ALERT	NATIONAL IRANIAN TANKER COMPANY	Vessel	9187643
SUNDIAL	NATIONAL IRANIAN TANKER COMPANY	Vessel	9187655
SILVER CLOUD	NATIONAL IRANIAN TANKER COMPANY	Vessel	9187667
HUWAYZEH	NATIONAL IRANIAN TANKER COMPANY	Vessel	9212888
HORIZON	NATIONAL IRANIAN TANKER COMPANY	Vessel	9212890
HAPPINESS	NATIONAL IRANIAN TANKER COMPANY	Vessel	9212905
MARINA	NATIONAL IRANIAN TANKER COMPANY	Vessel	9212917
HALISTIC	NATIONAL IRANIAN TANKER COMPANY	Vessel	9212929
DELVAR	NATIONAL IRANIAN TANKER COMPANY	Vessel	9218454
DAYLAM	NATIONAL IRANIAN TANKER COMPANY	Vessel	9218466
DAMAVAND	NATIONAL IRANIAN TANKER COMPANY	Vessel	9218478
DENA	NATIONAL IRANIAN TANKER COMPANY	Vessel	9218480
DARAB	NATIONAL IRANIAN TANKER COMPANY	Vessel	9218492
IRAN FAZEL	NATIONAL IRANIAN TANKER COMPANY	Vessel	9283746
FIANGA	NATIONAL IRANIAN TANKER COMPANY	Vessel	9283760
IRAN FAHIM	NATIONAL IRANIAN TANKER COMPANY	Vessel	9286140
IRAN FALAGH	NATIONAL IRANIAN TANKER COMPANY	Vessel	9286152
DECESIVE	NATIONAL IRANIAN TANKER COMPANY	Vessel	9356593
SANCHI	NATIONAL IRANIAN TANKER COMPANY	Vessel	9356608
MAJESTIC	NATIONAL IRANIAN TANKER COMPANY	Vessel	9357183
SUCCESS	NATIONAL IRANIAN TANKER COMPANY	Vessel	9357353

SUNEAST	NATIONAL IRANIAN TANKER COMPANY	Vessel	9357365
SPLENDOUR	NATIONAL IRANIAN TANKER COMPANY	Vessel	9357377
COURAGE	NATIONAL IRANIAN TANKER COMPANY	Vessel	9357389
HONESTY	NATIONAL IRANIAN TANKER COMPANY	Vessel	9357391
AMBER	NATIONAL IRANIAN TANKER COMPANY	Vessel	9357406
DAL LAKE	NATIONAL IRANIAN TANKER COMPANY	Vessel	9357717
JUSTICE	NATIONAL IRANIAN TANKER COMPANY	Vessel	9357729
HYDRA	NATIONAL IRANIAN TANKER COMPANY	Vessel	9362059
DOVE	NATIONAL IRANIAN TANKER COMPANY	Vessel	9362061
ZEUS	NATIONAL IRANIAN TANKER COMPANY	Vessel	9362073
IMICO NEKA 455	NATIONAL IRANIAN TANKER COMPANY	Vessel	9404546
IMICO NEKA 456	NATIONAL IRANIAN TANKER COMPANY	Vessel	9404558
IMICO NEKA 457	NATIONAL IRANIAN TANKER COMPANY	Vessel	9404560
SUNSHINE	NATIONAL IRANIAN TANKER COMPANY	Vessel	9569205
DOJRAN	NATIONAL IRANIAN TANKER COMPANY	Vessel	9569619
ATLANTIS	NATIONAL IRANIAN TANKER COMPANY	Vessel	9569621
FORTUN	NATIONAL IRANIAN TANKER COMPANY	Vessel	9569633
SALALEH	NATIONAL IRANIAN TANKER COMPANY	Vessel	9569645
SMOOTH	NATIONAL IRANIAN TANKER COMPANY	Vessel	9569657
SKYLINE	NATIONAL IRANIAN TANKER COMPANY	Vessel	9569669
INFINITY	NATIONAL IRANIAN TANKER COMPANY	Vessel	9569671
DEMOS	NATIONAL IRANIAN TANKER COMPANY	Vessel	9569683
YANGZHOU DAYANG DY905	NATIONAL IRANIAN TANKER COMPANY	Vessel	9575424
SUNRISE	NATIONAL IRANIAN TANKER COMPANY	Vessel	9615092
ANTHEM	SIQIRIYA MARITIME CORP	Vessel	8310669
JAFFNA	SIQIRIYA MARITIME CORP	Vessel	8609515
OLYSA	SIQIRIYA MARITIME CORP	Vessel	9001605

ATTACHMENT 4

ABBASI-DAVANI, Fereidoun
ADVANCE ELECTRICAL AND INDUSTRIAL TECHNOLOGIES SL
ALUMINAT
ANDISHEH ZOLAL
ARIA NIKAN MARINE INDUSTRY
BUJAR, Farhad
DAYENI, Mahmoud Mohammadi
EYVAZ TECHNIC MANUFACTURING COMPANY
FAKHRIZADEH-MAHABADI, Mohsen
FARATECH
FARAYAND TECHNIQUE
FULMEN GROUP
IMANIRAD, Arman
IMANIRAD, Mohammad Javad
IRAN CENTRIFUGE TECHNOLOGY COMPANY
IRAN POOYA
JAHAN TECH ROOYAN PARS
JAVEDAN MEHR TOOS
KAHVARIN, Iradj Mohammadi
KALAYE ELECTRIC COMPANY
KHAKI, Parviz
MANDEGAR BASPAR KIMIYA COMPANY
MARO SANAT COMPANY
MODERN INDUSTRIES TECHNIQUE COMPANY
NEDA INDUSTRIAL GROUP
NEKA NOVIN
PARTO SANAT CO.
PAYA PARTOV CO.
PENTANE CHEMISTRY INDUSTRIES
PETRO GREEN
PISHRO SYSTEMS RESEARCH COMPANY
POUYA CONTROL
PUNTI, Pere
RAHIMYAR, Amir Hossein
SIMATIC DEVELOPMENT CO.
TAGHTIRAN KASHAN COMPANY
TANIDEH, Hossein
TARH O PALAYESH
THE ORGANIZATION OF DEFENSIVE INNOVATION AND RESEARCH
TOWLID ABZAR BORESHI IRAN
WISSER, Gerhard
YASA PART
ZOLAL IRAN COMPANY

JCPOA Annex III - Civil Nuclear Cooperation

A. General

1. Iran and E3/EU+3 decided to co-operate, among others, including through IAEA technical cooperation, where appropriate, and without prejudice to the existing bilateral agreements, in different areas of civil nuclear co-operation to be developed within the framework of this JCPOA, as detailed in this Annex. In this context, the Joint Commission will also support assistance to Iran, including through IAEA technical cooperation projects, as appropriate.

2. All civil nuclear cooperation projects under this JCPOA will be mutually determined by the participating states and will be consistent with the JCPOA and the national laws and regulations of the participating parties.

3. The civil nuclear and scientific cooperation projects envisioned between Iran and the E3/EU+3 as part of this JCPOA may be undertaken in a variety of formats, with a variety of potential participants. A given project undertaken by the E3/EU+3 will not necessarily include participation by all E3/EU+3 parties:

3.1. bilateral or multilateral cooperation arrangements with Iran. Such arrangements would be mutually determined by the participating states.

3.2. projects under the auspices of the IAEA, either through IAEA technical co-operation projects including through Project and Supply Agreements.

3.3. through International Science and Technology Centres.

Specifically, E3/EU+3 parties will undertake, to develop nuclear co-operation with Iran, in particular within the following areas:

B. Reactors, Fuels and Associated Technologies, Facilities and Processes

4. Modern light water power and research reactors and associated equipment, technologies and facilities

E3/EU+3 parties, as appropriate, will facilitate Iran's acquisition of light-water research and power reactors, for research, development and testing, and for the supply of electricity and desalination, with arrangements for the assured supply of nuclear fuel and the removal of spent fuel as provided for in relevant contracts, for each reactor provided. This may include the following areas for co-operation:

4.1. Construction as well as effective and safe operation of new light water power reactors and associated equipment, according to Generation III+ requirements, including small and medium sized nuclear reactors, including joint design and manufacturing, as appropriate.

4.2. Construction of state of the art light water moderated multipurpose research reactors capable of testing fuel pins, assembly prototypes and structural materials with associated related facilities, including joint design and manufacturing, as appropriate.

4.3. Supply of state-of-the-art instrumentation and control systems for the above research and power reactors, including joint design and manufacturing, as appropriate;

4.4. Supply of nuclear simulation and calculation codes and software solutions with regard to the above areas, including joint development, as appropriate;

4.5. Supply of first and second loop main equipment as well as core of the above research and power reactors, including joint design and manufacturing, as appropriate;

4.6. On-the-job training on fuel management scenarios and reshuffling for the above research and power nuclear reactors;

4.7. Joint technical review of Iran's current nuclear reactors, upon the request by Iran, in order to upgrade current equipment and systems, including concerning nuclear safety;

5. Arak Modernisation Project

5.1. As described in Section B of Annex I, an international partnership composed of E3/EU+3 parties and Iran, which may subsequently be enlarged to include mutually determined third countries will be established, to support and facilitate the redesign and rebuilding of the IR-40 reactor at Arak into a modernised, not exceeding 20MWth, heavy-water moderated and cooled research reactor, based on the agreed conceptual design (as attached to Annex I).

5.2. Iran will take the leadership role as the owner and as the project manager, and have responsibility for overall implementation of the Arak modernisation project. A Working Group composed of E3/EU+3 participants will be established to support and facilitate the redesigning and rebuilding of the reactor. An international partnership composed of Iran and the Working Group would implement the Arak modernisation project, with E3/EU+3 participants assuming responsibilities as described in Annex I. The Working Group could be enlarged to include other countries by consensus of the participants of the Working Group and Iran. E3/EU+3 participants and Iran will conclude an official document expressing their strong commitments to the Arak modernisation project in advance of Implementation Day which would provide an assured path forward to modernise the reactor and would define the responsibilities assumed by the E3/EU+3 participants, especially in the key areas such as redesign, design review and certification, reactor core manufacturing, fuel design, fabrication and supply, safety and security, spent fuel treatment or disposition, as well as concerning the supply of materials, equipment, instrumentation and control systems, and subsequently contracts would be concluded. The participants of the Working Group will provide assistance needed by Iran for redesigning and rebuilding the reactor, consistent with their respective national laws, in such a manner as to enable the safe and timely construction and commissioning of the modernised reactor.

5.3. Iran and the Working Group will cooperate to develop the final design of the modernised reactor and the design of the subsidiary laboratories to be carried out by Iran, and review conformity with international safety standards, such that the reactor can be licensed by the relevant Iranian regulatory authority for commissioning and operation.

5.4. Iran will continue to assume the primary responsibility for financing the modernisation project. Additional funding arrangements for the project, including for IAEA projects supporting the Arak modernisation project, will be

determined based on the official document and contracts to be subsequently concluded.

6. Nuclear Fuel

6.1. E3/EU+3 parties, as appropriate, will support assistance to Iran, including through the IAEA, as appropriate, in meeting international qualification standards for nuclear fuel fabricated by Iran.

6.2. E3/EU+3 parties will seek to cooperate regarding the supply of modern fuels, including, as appropriate, joint design and fabrication, the relevant licenses and fabrication technologies and equipment and related infrastructure, for current and future nuclear research and power reactors, including technical assistance on purification processes, forming and metallurgical activities for different types of nuclear fuel clads and cladding for the modernised Arak heavy water research reactor.

C. Research and Development (R&D) Practices

7. To implement other aspects of this JCPOA and in support of a broader opening of scientific engagements between the E3/EU+3 and Iran, the E3/EU+3 and Iran will seek cooperation and scientific exchange in the field of nuclear science and technology:

7.1. Accelerator-based nuclear physics and nuclear astrophysics research, and stable isotope production in international collaboration at the nuclear, physics, and technology centre at the Fordow facility. Iran will request from the E3/EU+3 and other interested parties specific proposals for cooperative international nuclear, physics, and technology projects and will host an international workshop to review these proposals. The goal is to realise international collaborative projects within a few years. The transitioning to stable isotope production of two cascades will be conducted in a joint partnership between the Russian Federation and Iran on the basis of arrangements to be mutually agreed upon.

7.2. Plasma physics and nuclear fusion;

7.3. Research reactor applications at the TRR, modernized Arak reactor, or at other future research reactors in Iran, such as:

7.3.1. Training

7.3.2. Radio-isotope production and utilization

7.3.3. Nuclear desalination

7.3.4. Neutron transmutation doping

7.3.5. Neutron activation analysis

7.3.6. Neutron capture therapy

7.3.7. Neutron imaging and materials characterization studies using neutron beams

7.4. E3/EU+3 parties and Iran could also explore co-operation in the following additional areas:

7.4.1. Design, manufacture and/or assembly of in-core measuring instrumentation and technologies;

7.4.2. Nuclear instrumentation and control, systems and electronics design, manufacture and/or assembly;

7.4.3. Fusion technology and plasma physics and related infrastructure and facilitating contribution of Iran to the International Thermonuclear Experimental Reactor (ITER) Project and/or similar projects, including relevant IAEA technical cooperation projects;

7.4.4. Neutrino astronomy;

7.4.5. Design and manufacturing, and supply, of different types of accelerators and supply of related equipment including through relevant IAEA technical cooperation projects;

7.4.6. Data acquisition and processing software and interface equipment;

D. Nuclear Safety, Safeguards and Security

8. Nuclear safety

E3/EU+3 parties, and possibly other states, as appropriate, are prepared to cooperate with Iran to establish a Nuclear Safety Centre in Iran, engage in workshops and training events in Iran to support interactions between Iranian nuclear regulatory authorities and those from the E3/EU+3 and elsewhere to, among other things, share lessons learned on establishing and maintaining regulatory independence and effectiveness, and training on implementing nuclear safety culture and best practices; facilitate exchanges and visits to nuclear regulatory authorities and nuclear power plants outside of Iran focusing on best practices for safe operation; and enhance and strengthen domestic emergency preparedness and severe accident management capability.

Provide support and assistance to enable Iran to join relevant conventions on nuclear safety and security, e.g. through workshops or seminars furthering accession to such commitments. Such workshops or seminars could also take place under the auspices of the IAEA.

E3/EU+3 parties, and possibly other states, as appropriate, will co-operate with Iran in the following areas of nuclear safety, as well as in other areas to be mutually agreed:

8.1. Conclusion of bilateral/multilateral agreements with related organisations and research centres;

8.2. Supply of valid codes, instruments and equipment related to nuclear safety;

8.3. Facilitate exchange of knowledge and experience in the area of nuclear safety;

8.4. Enhance and strengthen domestic emergency preparedness and severe accident management capability;

8.5. Arrange on-the-job training and apprenticeship courses for reactor and facility operators, regulatory authority personnel and related supportive organizations in the area of nuclear safety inside and outside of Iran;

8.6. Establish a Nuclear Safety Centre in Iran, which shall be equipped with necessary tools, techniques and equipment, in order to support and facilitate technical and professional training and exchange of lessons-learned for reactor and facility operators, regulatory authority personnel and related supportive organizations;

9. Nuclear Safeguards

E3/EU+3 parties, and possibly other states, as appropriate, are prepared to cooperate with Iran on the effective and efficient implementation of IAEA safeguards and transparency measures in Iran. Co-operation in the following areas can be envisaged:

9.1. Cooperation in the form of on-the-job trainings and workshops to strengthen nuclear material accounting and control process, human resource development, and quality assurance/quality control processes;

9.2. E3/EU+3 parties, and other states, as appropriate, are prepared to cooperate with Iran for the effective and efficient implementation of IAEA safeguards and transparency measures in Iran.

9.3. This cooperation could take the form of training and workshops to strengthen Iran's safeguards regulatory authority, nuclear material accounting and control processes, human resource development, and quality assurance/quality control processes.

10. Nuclear Security

E3/EU+3 parties, and possibly other states, as appropriate, are prepared to cooperate with Iran on the implementation of nuclear security guidelines and best practices. Co-operation in the following areas can be envisaged:

10.1. Co-operation in the form of training courses and workshops to strengthen Iran's ability to prevent, protect and respond to nuclear security threats to nuclear facilities and systems as well as to enable effective and sustainable nuclear security and physical protection systems;

10.2. Co-operation through training and workshops to strengthen Iran's ability to protect against, and respond to nuclear security threats, including sabotage, as well as to enable effective and sustainable nuclear security and physical protection systems.

E. Nuclear Medicine and Radioisotopes, Associated Technologies, Facilities and Processes

11. E3/EU+3 parties, as appropriate, are prepared to cooperate with Iran to improve the utilization of nuclear medicine in Iran in order to enhance Iran's expertise in diagnostic imaging and radiotherapy, increase the availability of medical radioisotopes for diagnosis and treatment of Iranian citizens, and facilitate Iran's participation in the broader international scientific and nuclear medicine community. Such cooperation may include:

11.1. Upgrades to the infrastructure associated with existing cyclotron facilities, including for medical radioisotopes production.

11.2. Facilitating Iranian acquisition of a new cyclotron, and associated radio-pharmacy equipment, for medical radioisotopes production.

11.3. Acquisition of state-of-the-art diagnostic imaging and radiotherapy equipment for existing or new nuclear medicine centers, including co-operation between hospitals for the treatment of individual patients.

11.4. Cooperation on occupational and patient dosimetry procedures.

11.5. Improved target utilization to increase radioisotope production.

11.6. Acquisition of radioisotope sources for bracho therapy, and radiotherapy instrument calibration, and other medical and industrial applications.

11.7. Supply of state-of-the art radio-medicine center and necessary laboratories.

F. Waste Management and Facility Decommissioning

12. E3/EU+3 parties, as appropriate, are prepared to cooperate with Iran in the safe, effective, and efficient management and disposition of nuclear and radiological wastes derived from Iran's nuclear fuel cycle activities and nuclear medicine, radioisotope production and/or consumption activities.

13. E3/EU+3 parties, as appropriate, are prepared to cooperate with Iran in areas of safe, effective, and environmentally friendly best practices for facility decontamination and decommissioning, including co-operation on long term storage facilities for the repository of low and medium level waste.

14. E3/EU+3 parties, as appropriate, are prepared to facilitate exchanges and visits to relevant sites and locations outside of Iran related to effective waste management and best practices.

15. E3/EU+3 parties, as appropriate, will facilitate the supply of appropriate equipment and systems for waste management and depository facilities in Iran.

G. Other projects

16. Other projects may be implemented between the relevant E3/EU+3 parties and Iran, as mutually determined by the participants in the JCPOA, including in the following areas:

16.1. Construction of nuclear desalination and associated infrastructure in Iran;

16.2. Development of laser technology for medical applications (e.g. for eye surgery);

JCPOA Annex IV – Joint Commission

1. Establishment, Composition, and Coordinator

1.1. The Joint Commission is established to carry out the functions assigned to it in the JCPOA, including its Annexes.

1.2. The Joint Commission is comprised of representatives of Iran and the E3/EU+3 (China, France, Germany, the Russian Federation, the United Kingdom, and the United States, with the High Representative of the Union for Foreign Affairs and Security Policy), together, the JCPOA participants.

1.3. The Joint Commission may establish Working Groups in particular areas, as appropriate.

1.4. The High Representative of the Union for Foreign Affairs and Security Policy ('High Representative'), or his/her designated representative will serve as the Coordinator of the Joint Commission.

2. Functions

2.1. The Joint Commission will perform the following functions:

2.1.1. Review and approve the final design for the modernized heavy water research reactor and the design of the subsidiary laboratories prior to the commencement of construction, and review and approve the fuel design for the modernized heavy water research reactor as provided for in Section B of Annex I;

2.1.2. Review and approve, upon request by Iran, development, acquisition, construction or operation of hot cells (containing a cell or interconnected cells), shielded cells or shielded glove boxes with dimensions beyond 6 cubic meters in volume and specifications set out in Annex I of the Additional Protocol, as provided for in paragraph 21 of Annex I;

2.1.3. Review and approve plans submitted by Iran to initiate R&D on uranium metal based TRR fuel, as provided for in paragraph 26 of Annex I;

2.1.4. Review and approve, upon request by Iran, projects on new types of centrifuges to proceed to a prototype stage for mechanical testing, as provided for in paragraph 43 of Annex I;

2.1.5. Receive information in advance about the specific projects that will be undertaken at Fordow, as provided for in paragraph 44 of Annex I;

2.1.6. Receive information about the conceptual framework of stable isotope production at Fordow, as provided for in paragraph 46.1 of Annex I;

2.1.7. Assess and then approve, upon request by Iran, that fuel assemblies manufactured in Iran and their intermediate products cannot be readily reconverted into UF6, based on the objective technical criteria, with the goal of enabling fuel to be fabricated in Iran, as provided in paragraph 59 of Annex I;

2.1.8. Support assistance to Iran, including through IAEA technical cooperation as appropriate, in meeting international qualification standards for nuclear fuel produced by Iran, as provided for in paragraph 59 of Annex I;

2.1.9. Review and approve in advance, upon request by Iran, engagement by Iran, including through export of any enrichment or enrichment related equipment and technology, with any other country, or with any foreign entity in enrichment and enrichment related activities, including related research and development, as provided for in paragraph 73 in Annex I;

2.1.10. Provide consultation, and advise on the necessary means in the context of access as specified in paragraph 78 of Annex I;

2.1.11. Review and approve in advance, upon request by Iran, the design, development, fabrication, acquisition, or use for non-nuclear purposes of multi-point explosive detonation systems suitable for a nuclear explosive device and explosive diagnostic systems (streak cameras, framing cameras and flash x-ray cameras) suitable for the development of a nuclear explosive device, as provided for in paragraphs 82.2 and 82.3 of Annex I;

2.1.12. Review and consult to address issues arising from the implementation of sanctions lifting as specified in this JCPOA and its Annex II;

2.1.13. Review and decide on proposals for nuclear-related transfers to or activities with, Iran, in accordance with Section 6 of this Annex and the United Nations Security Council resolution endorsing this JCPOA;

2.1.14. Review, with a view to resolving, any issue that a JCPOA participant believes constitutes nonperformance by another JCPOA participant of its commitments under the JCPOA, according to the process outlined in the JCPOA;

2.1.15. Adopt or modify, as necessary, procedures to govern its activities;

2.1.16. Consult and provide guidance on other implementation matters that may arise under the JCPOA.

3. Procedures

3.1. The Joint Commission will meet on a quarterly basis and at any time upon request of a JCPOA participant to the Coordinator. The Coordinator will convene a meeting of the Joint Commission to be held no later than one week following receipt of such a request, except for consultations in accordance with Section Q of Annex I and any other matter that the Coordinator and/or a JCPOA participant deem urgent, in which case the meeting will be convened as soon as possible and not later than three calendar days from receipt of the request.

3.2. Meetings of the Joint Commission will be held in New York, Vienna, or Geneva as appropriate. The host country should facilitate entry formalities for those attending such meetings.

3.3. The Joint Commission may decide by consensus to invite observers to attend its meetings.

3.4. Except as provided in Section 6 of this Annex which will be subject to the confidentiality procedure of the UN, the work of the Joint Commission is

confidential and may be shared only among JCPOA participants and observers as appropriate, unless the Joint Commission decides otherwise.

4. Decisions

4.1. Except as stated otherwise in this Annex, decisions by the Joint Commission are to be made by consensus.

4.2. Each JCPOA participant will have one vote. Decisions of the Joint Commission are to be taken by the Representative or the Deputy Representative or other such alternate as the JCPOA participant may designate.

4.3. The vote of each JCPOA participant will be made known to all other JCPOA participants if any JCPOA participant requests a recorded vote.

4.4. Matters before the Joint Commission pursuant to Section Q of Annex I are to be decided by consensus or by affirmative vote of five JCPOA participants. There is no quorum requirement.

4.5. The Coordinator will not take part in decision-making on nuclear-related transfers and activities as set out in Section 6 of this Annex.

5. Other

5.1. Each JCPOA participant will be responsible for its own costs of participating in the Joint Commission, unless the Joint Commission decides otherwise.

5.2. JCPOA participants may request that the Coordinator circulates a notification to the other JCPOA participants at any time. Upon such a request, the Coordinator will circulate such notification without delay to all JCPOA participants.

6. Procurement Working Group

6.1. With the purpose of establishing a procurement channel, the Joint Commission will, except as otherwise provided by the United Nations Security Council resolution endorsing this JCPOA, review and decide on proposals by states seeking to engage in:

6.1.1. the supply, sale or transfer directly or indirectly from their territories, or by their nationals or using their flag vessels or aircraft to, or for the use in or benefit of, Iran, and whether or not originating in their territories, of all items, materials, equipment, goods and technology set out in INFCIRC/254/Rev.12/Part 1, and, if the end-use will be for Iran's nuclear programme set out in this JCPOA or other non-nuclear civilian end-use, all items, materials, equipment, goods and technology set out in INFCIRC/254/Rev.9/Part 2 (or the most recent version of these documents as updated by the Security Council), as well as any further items if the relevant State determines that they could contribute to activities inconsistent with the JCPOA; and,

6.1.2. the provision to Iran of any technical assistance or training, financial assistance, investment, brokering or other services related to the supply, sale, transfer, manufacture, or use of the items, materials, equipment, goods and technology described in subparagraph (a) above;

6.1.3. acquisition by Iran of an interest in a commercial activity in another State involving uranium mining, production or use of nuclear materials and technologies as listed in INFCIRC/254/Rev.12/Part 1, and such investments in territories under their jurisdiction by Iran, its nationals, and entities incorporated in Iran or subject to its jurisdiction, or by individuals or entities acting on their behalf or direction, or by entities owned or controlled by them.

6.2. The Joint Commission will discharge its responsibility for reviewing and making recommendations on proposals for nuclear-related transfers to or activities with Iran through a Procurement Working Group.

6.3. Each E3+3 State and Iran will participate in the Procurement Working Group. The High Representative will serve as the Coordinator of the Procurement Working Group.

6.4. Except as otherwise provided by the Joint Commission or the United Nations Security Council resolution endorsing this JCPOA, the Procurement Working Group will consider proposals according to the following process:

6.4.1. Upon receipt of a proposal, including all necessary supporting information, by a State seeking to engage in transfers and activities referenced in Section 6.1, the Coordinator will forward the proposal, through appropriate means, without delay to the Procurement Working Group and, when the proposal relates to items, material, equipment, goods and technology intended to be used in nuclear activities authorized by the JCPOA, to the IAEA. The Procurement Working Group will have up to 30 working days to consider and decide on the proposal.

6.4.2. "Necessary supporting information" for purposes of Section 6.4.1 means: (a) a description of the item; (b) the name, address, telephone number, and email address of the exporting entity; (c) the name, address, telephone number, and email address of the importing entity; (d) a statement of the proposed end-use and end use location, along with an end-use certification signed by the AEOI or the appropriate authority of Iran attesting the stated end-use; (e) export license number if available; (f) contract date, if available; and (g) details on transportation, if available; provided that if any of the export license number, contract date, or details on transportation are not available as of the time of submittal of the proposal, such information will be provided as soon as possible and in any event as condition of approval prior to shipment of the item.

6.4.3. Each participant in the Procurement Working Group will have to communicate to the Coordinator, within 20 working days, whether it approves or rejects the proposal. The timeline for consideration may be extended for an additional period of 10 working days at the request of a participant of the Procurement Working Group.

6.4.4. The proposal will be recommended for approval as soon as the Coordinator receives formal approvals from all the Procurement Working Group Participants or if, at the end of the 30 working day period, the Coordinator has received no disapprovals from any of the Procurement Working Group Participants. If at the end of the 30 working day period, the proposal has

not been recommended for approval, the proposal may, at the request of at least two Working Group Participants within 5 working days, be referred to the Joint Commission, which would decide on approval of the proposal by consensus within 10 working days. Otherwise the proposal will be recommended for disapproval. The disapproving JCPOA participant(s) should provide relevant information regarding the disapproval to the Joint Commission as appropriate, taking into account the need to protect confidential information.

6.4.5. The Coordinator will communicate the recommendation of the Joint Commission to the United Nations Security Council no later than 35 working days, or in case of referral to the Joint Commission no later than 45 working days from the date the Coordinator transmitted the proposal and all necessary supporting information to the Procurement Working Group.

6.4.6. Except as decided otherwise by consensus, the Procurement Working Group will meet every three weeks for reviewing the proposals. When some of the proposals to be reviewed relate to items, material, equipment, goods and technology intended to be used in nuclear activities authorized by the JCPOA, the IAEA may be invited to attend the meeting as an observer.

6.5. All JCPOA participants will act in accordance with the procurement channel and will only engage in transfers and activities referenced in Section 6.1 following approval by the Joint Commission and the United Nations Security Council. Iran will not use, acquire, or seek to procure the items, materials, equipment, goods, and technology referred to in Section 6.1 of this Annex for nuclear activities which are inconsistent with this JCPOA.

6.6. Any JCPOA participant may refer a procurement-related activity to the Joint Commission under the dispute settlement mechanism if it is concerned that such activity is inconsistent with this JCPOA.

6.7. Iran will provide to the IAEA access to the locations of intended use of all items, materials, equipment, goods and technology set out in INFCIRC/254/Rev.12/Part 1 (or the most recent version of these documents as updated by the Security Council) imported following the procedure under Section 6 of this Annex.

6.8. Iran will permit the exporting state to verify the end-use of all items, materials, equipment, goods and technology set out in INFCIRC/254/Rev.9/Part 2 (or the most recent version of these documents as updated by the Security Council) imported following the procedure under Section 6 of this Annex. Upon request of the exporting state, or if the Joint Commission deems necessary when approving a proposal for transfer, the Joint Commission will provide expertise to the exporting state, including experts, as needed, to participate in the end-use verification.

6.9. The Procurement Working Group will respond to requests for guidance on procurement activities from third parties, as communicated by the Coordinator. The Procurement Working Group will endeavor to respond to

such requests for guidance within 9 working days from the date the Coordinator submits it to the Procurement Working Group.

6.10. The Joint Commission will report to the United Nations Security Council at least every 6 months on the status of the Procurement Working Group's decisions and on any implementation issues.

7. Working Group on Implementation of Sanctions Lifting

7.1. The Joint Commission will discharge its responsibilities for reviewing and consulting on issues related to the implementation of sanctions lifting as specified in this JCPOA assisted by a working group on the implementation of sanctions lifting.

7.2. The Joint Commission participants will participate in this working group. The High Representative will serve as coordinator of this working group.

7.3. If at any time following the implementation day Iran believes that any other nuclear-related sanction or restrictive measure including related designations of the E3/EU+3 is preventing the full implementation of the sanctions lifting as specified in this JCPOA, the JCPOA participant in question will consult with Iran with a view to resolving the issue. If they are not able to resolve the issue, Iran or any member of the E3/EU+3 may refer the issue to the working group.

7.4. The participants of the working group will review and consult, with a view to resolving the issue within 30 working days.

7.5. If after involvement of the working group, the issue remains unresolved, any participant of the JCPOA may refer it to the Joint Commission.

JCPOA Annex V - Implementation Plan[1]

1. This Annex describes the sequence of the actions specified in Annexes I and II to this JCPOA.

A. Finalisation Day

2. Upon conclusion of the negotiations of this JCPOA, the E3/EU+3 (China, France, Germany, the Russian Federation, the United Kingdom and the United States, with the High Representative of the European Union for Foreign Affairs and Security Policy) and Iran will endorse this JCPOA.

3. Promptly after the conclusion of the negotiations of this JCPOA, the proposed UN Security Council resolution referred to in Section 18 of this Annex will be submitted to the UN Security Council for adoption without delay.

4. The EU will promptly endorse the UN Security Council resolution referred to above through Council Conclusions.

5. Iran and the IAEA will start developing necessary arrangements to implement all transparency measures provided for in this JCPOA so that such arrangements are completed, in place, and ready for implementation on Implementation Day.

B. Adoption Day

6. Adoption Day will occur 90 days after the endorsement of this JCPOA by the UN Security Council through the resolution referred to above, or at an earlier date by mutual consent of all JCPOA participants, at which point this JCPOA comes into effect.

7. Beginning on Adoption Day, JCPOA participants will make necessary arrangements and preparations, including legal and administrative preparations, for the implementation of their JCPOA commitments.

8. Iran will officially inform the IAEA that, effective on Implementation Day, Iran will provisionally apply the Additional Protocol, pending its ratification by the Majlis (Parliament), and will fully implement the modified code 3.1.

9. Iran will implement paragraph 66 from Section M on "Past and Present Issues of Concern" of Annex I.

10. The EU and its Member States will adopt an EU Regulation, taking effect as of Implementation Day, terminating all provisions of the EU Regulation implementing all nuclear-related economic and financial EU sanctions as specified in Section 16.1 of this Annex, simultaneously with the IAEA-verified implementation by Iran of agreed nuclear-related measures.

11. The United States, acting pursuant to Presidential authorities, will issue waivers, to take effect upon Implementation Day, ceasing the application of the statutory nuclear-related sanctions as specified in Sections 17.1 to 17.2 of this Annex. The President will also take action to direct that all appropriate

[1] This Annex is only for the purpose of determining the sequence of implementation of the commitments described in this JCPOA and annexes thereto and does not restrict or expand the scope of these commitments.

additional measures be taken to implement the cessation of application of sanctions as specified in Sections 17.1 to 17.4 of this Annex, including the termination of Executive orders as specified in Section 17.4, and the licensing of activities as specified in Section 17.5.

12. E3/EU+3 participants and Iran will begin discussions on an official document to be concluded in advance of Implementation Day which will express strong commitments of the E3/EU+3 participants to the Arak Heavy Water Reactor modernisation project and define the responsibilities assumed by the E3/EU+3 participants.

13. The EU, its Member States and the United States will begin consultation as appropriate with Iran regarding relevant guidelines and publicly accessible statements on the details of sanctions or restrictive measures to be lifted under this JCPOA.

C. Implementation Day

14. Implementation Day will occur upon the IAEA-verified implementation by Iran of the nuclear-related measures described in paragraph 15 below, and, simultaneously, the E3/EU+3 taking the actions described in paragraphs 16 and 17 below, and with the actions described in paragraph 18 below taking place at the UN level in accordance with the UN Security Council resolution.

15. **Iran will implement the nuclear-related measures as specified in Annex I:**

15.1. Paragraphs 3 and 10 from Section B on "Arak Heavy Water Research Reactor";

15.2. Paragraphs 14 and 15 from Section C on "Heavy Water Production Plant";

15.3. Paragraphs 27, 28, 29, 29.1 and 29.2 from Section F on "Enrichment Capacity";

15.4. Paragraphs 32, 33, 34, 35, 36, 37, 38, 39, 40, 41 and 42 from Section G on "Centrifuges Research and Development";

15.5. Paragraphs 45, 46, 46.1, 46.2, 47.1, 48.1 from Section H on "Fordow Fuel Enrichment Plant";

15.6. Paragraphs 52, 54 and 55 from Section I on "Other Aspects of Enrichment";

15.7. Paragraphs 57 and 58 from Section J on "Uranium Stocks and Fuels";

15.8. Paragraph 62 from Section K on "Centrifuge Manufacturing";

15.9. Complete the modalities and facilities-specific arrangements to allow the IAEA to implement all transparency measures provided for in Annex I;

15.10. Paragraphs 64 and 65 from Section L on "Additional Protocol and Modified Code 3.1";

15.11. Paragraphs 80.1 and 80.2 from Section R on "Centrifuge Component Manufacturing Transparency"; and

15.12. Within one year from Implementation Day, Iran will have completed the measures specified in paragraphs 47.2 and 48.2 of Section H on "Fordow Fuel Enrichment Plant".

16. **The European Union will:**

16.1. Terminate the provisions of Council Regulation (EU) No 267/2012 and suspend the corresponding provisions of Council Decision 2010/413/CFSP specified in Sections 1.1.1-1.1.3; 1.1.5-1.1.8; 1.2.1-1.2.5; 1.3.1, 1.3.2 (in so far as it concerns Articles 16 and 17 of Council Decision 2010/413/CFSP) and 1.3.3; 1.4.1 and 1.4.2; 1.10.1.2 (in so far as it concerns Articles 39, 43, 43a of Council Regulation (EU) No 267/2012) of Annex II. EU Member States will terminate or amend national implementing legislation as required.

16.2. Amend the provisions of Council Regulation (EU) No 267/2012 and the corresponding provisions of Council Decision 2010/413/CFSP specified in Sections 1.6.1-1.7.2 of Annex II, in connection with activities consistent with this JCPOA.

16.3. Remove individuals and entities set forth in Attachment 1 to Annex II of this JCPOA from Annexes VIII and IX to Council Regulation (EU) 267/2012. Suspend the provisions of Council Decision 2010/413/CFSP specified in Section 1.9.1 of Annex II in relation to individuals and entities set forth in Attachment 1 to Annex II.

16.4. Amend the provisions of Council Regulation (EU) No 267/2012 and Council Decision 2010/413/CFSP specified in Sections 1.5.1 and 1.5.2 of Annex II to implement the relevant provisions of the UN Security Council resolution referred to above.

17. **The United States will:**[2]

17.1. Cease the application of the sanctions set forth in Sections 4.1-4.5 and 4.7 of Annex II, with the exception of Section 211(a) of the Iran Threat Reduction and Syria Human Rights Act of 2012 (TRA);

17.2. Cease the application of the sanctions set forth in Section 4.6 of Annex II, in connection with activities consistent with this JCPOA, including trade with individuals and entities set forth in Attachment 3 to Annex II;

17.3. Remove individuals and entities set forth in Attachment 3 to Annex II from the Specially Designated Nationals and Blocked Persons List (SDN List), the Foreign Sanctions Evaders List (FSE List), and/or the Non-SDN Iran Sanctions Act List as set forth in Section 4.8.1 of Annex II;

17.4. Terminate Executive Orders 13574, 13590, 13622, 13645 and Sections 5-7 and 15 of Executive Order 13628 as set forth in Section 4 of Annex II; and

17.5. License activities as set forth in Section 5 of Annex II.

18. **UN Security Council**

18.1. In accordance with the UN Security Council resolution endorsing this JCPOA, the provisions imposed in UN Security Council resolutions 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), 1929 (2010) and 2224 (2015) will be terminated subject to re-imposition in the event of significant non-performance by Iran of JCPOA commitments, and specific

[2] The sanctions that the United States will cease to apply are those directed towards non-U.S. persons, as described in Section 4 of Annex II.

restrictions, including restrictions regarding the transfer of proliferation sensitive goods will apply.[3]

18.2. The E3/EU+3 will take appropriate measures to implement the new UNSC resolution.

D. Transition Day

19. Transition Day will occur 8 years from Adoption Day or upon a report from the Director General of the IAEA to the IAEA Board of Governors and in parallel to the UN Security Council stating that the IAEA has reached the Broader Conclusion that all nuclear material in Iran remains in peaceful activities, whichever is earlier.

20. **The European Union will:**

20.1. Terminate the provisions of Council Regulation (EU) No 267/2012 and suspend the corresponding provisions of Council Decision 2010/413/CFSP specified in Sections 1.1.4, 1.3.2 (in so far as it concerns Articles 15 and 18 of Council Decision and Articles 36 and 37 of Council Regulation); 1.5.1 and 1.5.2 (in so far as it concerns Ballistic Missiles restrictions); 1.6.1-1.9.1 of Annex II.

20.2. Remove individuals and entities set forth in Attachment 2 to Annex II from Annexes VIII and IX to Council Regulation (EU) 267/2012.

20.3. Remove individuals and entities set forth in Attachment 1 to Annex II from Annexes I and II to Council Decision 2010/413/CFSP.

20.4. Terminate all provisions in Council Decision 2010/413/CFSP suspended on Implementation Day.

21. **The United States will:**

21.1. Seek such legislative action as may be appropriate to terminate, or modify to effectuate the termination of, the statutory sanctions set forth in Sections 4.1-4.5, 4.7 and 4.9 of Annex II;

21.2. Seek such legislative action as may be appropriate to terminate, or modify to effectuate the termination of, the statutory sanctions described in Section 4.6 of Annex II, in connection with activities consistent with this JCPOA, including trade with individuals and entities set forth in Attachments 3 and 4 to Annex II; and

21.3. Remove individuals and entities set out in Attachment 4 to Annex II from the SDN List and/or the FSE List as set forth in Section 4.8.1 of Annex II.

22. **Iran will:**

22.1. Seek, consistent with the Constitutional roles of the President and Parliament, ratification of the Additional Protocol.

E. UNSCR Termination Day

23. UNSCR (UN Security Council resolution) Termination Day will occur in accordance with the terms of the UN Security Council resolution endorsing

[3] The provisions of this Resolution do not constitute provisions of this JCPOA.

the JCPOA, which is 10 years from Adoption Day, provided that the provisions of previous resolutions have not been reinstated.

24. On UNSCR Termination Day, the provisions and measures imposed in that resolution would terminate and the UN Security Council would no longer be seized of the Iran nuclear issue.

25. **The European Union will:**

25.1. Terminate all remaining provisions of Council Regulation (EU) No 267/2012 and Council Decision 2010/413/CFSP.

F. Other

26. The terminations described in this Annex V are without prejudice to other JCPOA commitments that would continue beyond such termination dates.

Annex B: Statement

Statement

China, France, Germany, the Russian Federation, the United Kingdom, the United States, and the European Union have concluded with Iran a Joint Comprehensive Plan of Action (JCPOA) to reach a comprehensive, long-term and proper solution to the Iranian nuclear issue. To improve transparency and create an atmosphere conducive to the full implementation of the JCPOA, China, France, Germany, the Russian Federation, the United Kingdom, the United States, and the European Union have set forth below certain provisions. Their participation in the JCPOA is contingent upon the United Nations Security Council adopting a new resolution that would, acting under Article 41 of the UN Charter: terminate resolutions 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), 1929 (2010), and 2224 (2015); require States to comply with the provisions in this statement for their respective durations; and facilitate, in cooperation with the Joint Commission established in the JCPOA, implementation of the JCPOA as provided in paragraphs 2 and 6(a) below.

As provided by a resolution so deciding, the following provisions would apply on the date on which the IAEA Director General submits a report verifying that Iran has taken the actions specified in paragraph 15.1-15.11 of Annex V of the JCPOA:

1. The term "all States" as used in this document, and as incorporated in the resolution, means "all States without exception."

2. All States may participate in and permit the following activities provided that approval is provided in advance, on a case-by-case basis, by the Security Council:

   (a) the supply, sale or transfer directly or indirectly from their territories, or by their nationals or using their flag vessels or aircraft to, or for the use in or benefit of, Iran, and whether or not originating in their territories, of all items, materials, equipment, goods and technology set out in INFCIRC/254/Rev.12/Part 1 and INFCIRC/254/Rev.9/Part 2 (or the most recent versions of these documents, as updated by the Security Council), as well as any further items if the State determines that they could contribute to reprocessing or enrichment-related or heavy water-related activities inconsistent with the JCPOA;

   (b) the provision to Iran of any technical assistance or training, financial assistance, investment, brokering or other services, and the transfer of financial resources or services, related to the supply, sale, transfer, manufacture or use of the items, materials, equipment, goods and technology described in subparagraph (a) above; and

   (c) acquisition by Iran of an interest in a commercial activity in another State involving uranium mining or production or use of nuclear materials and technology as listed in INFCIRC/254/Rev.12/Part 1, and such investment in territories under their jurisdiction by Iran, its nationals, and entities incorporated in Iran or subject to its jurisdiction, or by individuals or entities acting on their behalf or at their direction, or by entities owned or controlled by them,

except that approval in advance by the Security Council shall not be required for the supply, sale, or transfer to Iran of equipment covered by B.1 of INFCIRC/254/Rev.12/Part 1 when such equipment is for light water reactors, low-enriched uranium covered by A.1.2 of INFCIRC/254/Rev.12/Part 1 when it is incorporated in assembled nuclear fuel elements for such reactors, as well as items, materials, equipment, goods and technology set out in INFCIRC/254/Rev. 9/Part 2 only when for exclusive use in light water reactors.

For any items, materials, equipment, goods and technology that are approved by the Security Council pursuant to subparagraph (a) above, or are supplied, sold, or transferred subject to the exception stated above, States are to ensure that: (a) the requirements, as appropriate, of the Guidelines as set out in the referenced INFCIRC have been met; (b) they have obtained and are in a position to exercise effectively a right to verify the end-use and end-use location of any supplied item; (c) they notify the Security Council within ten days of the supply, sale or transfer; and d) in the case of supplied items, materials, equipment, goods and technology listed in the referenced INFCIRCs, they also notify the IAEA within ten days of the supply, sale or transfer.

And except also that approval in advance by the Security Council is not required for the supply, sale, or transfer of items, materials, equipment, goods and technology, and the provision of any related technical assistance, training, financial assistance, investment, brokering or other services, that is directly related to the necessary modification of two cascades at the Fordow facility for stable isotope production, the export of Iran's enriched uranium in excess of 300 kilograms in return for natural uranium, and the modernization of the Arak reactor based on the agreed conceptual design and, subsequently, on the agreed final design of such reactor, provided that Member States ensure that: (a) all such activities are undertaken strictly in accordance with the JCPOA; (b) they notify the Security Council and Joint Commission ten days in advance of such activities; (c) the requirements, as appropriate, of the Guidelines as set out in the referenced INFCIRC have been met; (d) they have obtained and are in a position to exercise effectively a right to verify the end-use and end-use location of any supplied item; and (e) in case of supplied items, materials, equipment, goods and technology listed in the referenced INFCIRCs, they also notify the IAEA within ten days of the supply, sale or transfers.

This paragraph shall apply until the date ten years after JCPOA Adoption Day, as defined in the JCPOA, except if the IAEA submits a report confirming the Broader Conclusion before that date, then the requirement to obtain approval in advance by the Security Council shall be suspended immediately and, beginning on the date of this suspension, the exceptions provided for in this paragraph shall continue to apply and all States may participate in and permit the activities set forth in this paragraph if they notify the Security Council and the Joint Commission at least ten working days in advance of each such activity on a case-by-case basis.

3. Iran is called upon not to undertake any activity related to ballistic missiles designed to be capable of delivering nuclear weapons, including launches using such ballistic missile technology, until the date eight years after the JCPOA Adoption Day or until the date on which the IAEA submits a report confirming the Broader Conclusion, whichever is earlier.

4. All States may participate in and permit the activities described below *provided* that the Security Council decides in advance on a case-by-case basis to permit such activity:

(a) the supply, sale or transfer directly or indirectly from their territories, or by their nationals or using their flag vessels or aircraft to or from Iran, or for the use in or benefit of Iran, and whether or not originating in their territories, of all items, materials, equipment, goods and technology set out in S/2015/546 and of any items, materials, equipment, goods and technology that the State determines could contribute to the development of nuclear weapon delivery systems; and

(b) the provision to Iran of any technology or technical assistance or training, financial assistance, investment, brokering or other services, and the transfer of financial resources or services, or Iran's acquisition of an interest in any commercial activity in another State, related to the supply, sale, transfer, manufacture or use of the items, materials, equipment, goods and technology described in subparagraph a of this paragraph or related to the activities described in paragraph 3.

provided that in the event of an approval by the Security Council: (a) the contract for delivery of such items or assistance include appropriate end-user guarantees; and (b) Iran commit not to use such items for development of nuclear weapon delivery systems.

This paragraph shall apply until the date eight years after the JCPOA Adoption Day or until the date on which the IAEA submits a report confirming the Broader Conclusion, whichever is earlier.

5. All States may participate in and permit, *provided* that the Security Council decides in advance on a case-by-case basis to approve: the supply, sale or transfer directly or indirectly from or through their territories, or by their nationals or individuals subject to their jurisdiction, or using their flag vessels or aircraft, and whether or not originating in their territories, to Iran, or for the use in or benefit of Iran, of any battle tanks, armoured combat vehicles, large caliber artillery systems, combat aircraft, attack helicopters, warships, missiles or missile systems, as defined for the purpose of the United Nations Register of Conventional Arms, or related materiel, including spare parts, and the provision to Iran by their nationals or from or through their territories of technical training, financial resources or services, advice, other services or assistance related to the supply, sale, transfer, manufacture, maintenance, or use of arms and related materiel described in this subparagraph.

This paragraph shall apply until the date five years after the JCPOA Adoption Day or until the date on which the IAEA submits a report confirming the Broader Conclusion, whichever is earlier.

6. All States are to:

(a) Take the necessary measures to ensure that any activities described in paragraphs 2, 4, and 5 occur on their territories, or involving their nationals or individuals subject to their jurisdiction, or involving their flag vessels or aircraft, only pursuant to the relevant terms of those paragraphs, and also to prevent and prohibit any activities inconsistent

with these provisions, until the date ten years after the JCPOA Adoption Day or until the date on which the IAEA submits a report confirming the Broader Conclusion, whichever is earlier;

(b) Take the necessary measures to prevent, except as decided otherwise by the UN Security Council in advance on a case-by-case basis, the supply, sale, or transfer of arms or related materiel from Iran by their nationals or using their flag vessels or aircraft, and whether or not originating in the territory of Iran, until the date five years after the JCPOA Adoption Day or until the date on which the IAEA submits a report confirming the Broader Conclusion, whichever is earlier;

(c) For eight years after the JCPOA Adoption Day or until the date on which the IAEA submits a report confirming the Broader Conclusion, whichever is earlier, continue to freeze the funds, other financial assets and economic resources which are on their territories at the date of adoption of the JCPOA, and freeze the funds, other financial assets and economic resources which are on their territories at any time thereafter, that are owned or controlled by the individuals and entities that were specified on the list established and maintained by the Committee pursuant to resolution 1737 (2006) as of the date of adoption of the new resolution, with the exception of those individuals and entities specified in Attachment hereto, or that may be de-listed by the Security Council, and freeze those of additional individuals and entities that may be designated by the Security Council as: having engaged in, directly associated with or provided support for Iran's proliferation-sensitive nuclear activities undertaken contrary to Iran's commitments in the JCPOA or the development of nuclear weapon delivery systems, including through the involvement in procurement of prohibited items, goods, equipment, materials and technology specified in this statement; having assisted designated individuals or entities in evading or acting inconsistently with the JCPOA or the new resolution; having acted on behalf or at the direction of designated individuals or entities; or having been owned or controlled by designated individuals or entities, including through illicit means.

(d) For eight years from the JCPOA Adoption Day or until the date on which the IAEA submits a report confirming the Broader Conclusion, whichever is earlier, ensure that any funds, financial assets or economic resources are prevented from being made available by their nationals or by any individuals or entities within their territories, to or for the benefit of designated individuals or entities. These requirements shall not apply to funds, other financial assets or economic resources that have been determined by relevant States:

i. To be necessary for basic expenses, including payment for foodstuffs, rent or mortgage, medicines and medical treatment, taxes, insurance premiums, and public utility charges or exclusively for payment of reasonable professional fees and reimbursement of incurred expenses associated with the provision of legal services, or fees or service charges, in accordance with national laws, for routine holding or maintenance of frozen funds,

other financial assets and economic resources, after notification by the relevant States to the Security Council of the intention to authorize, where appropriate, access to such funds, other financial assets or economic resources and in the absence of a negative decision by the Security Council within five working days of such notification;

ii. To be necessary for extraordinary expenses, provided that such determination has been notified by the relevant States to the Security Council and has been approved by the Security Council;

iii. To be necessary for the civil nuclear cooperation projects described in Annex III of the JCPOA, provided that such determination has been notified by the relevant States to the Security Council and has been approved by the Security Council;

iv. To be the subject of a judicial, administrative or arbitral lien or judgment, in which case the funds, other financial assets and economic resources may be used to satisfy that lien or judgment provided that the lien or judgment was entered into prior to the date of Security Council resolution 1737 (2006), is not for the benefit of a person or entity subject to the measures in this paragraph, and has been notified by the relevant States to the Security Council; or

v. To be necessary for activities directly related to the items specified in paragraph 2, or to any other activity required for the implementation of the JCPOA, provided that such determination has been notified by the relevant States to the Security Council and has been approved by the Security Council.

In addition, this provision shall not prevent a designated individual or entity from making payment due under a contract entered into prior to the listing of such individual or entity, provided that the relevant States have determined that the contract is not related to any of the prohibited items, materials, equipment, goods, technologies, assistance, training, financial assistance, investment, brokering or services referred to in this statement; the payment is not directly or indirectly received by an individual or entity subject to the measures in this paragraph; and after notification by the relevant States to the Security Council of the intention to make or receive such payments or to authorize, where appropriate, the unfreezing of funds, other financial assets or economic resources for this purpose, ten working days prior to such authorization.

In addition, States may permit the addition to the accounts frozen pursuant to this paragraph of interest or other earnings due on those accounts or payments due under contracts, agreements or obligations that arose prior to the date on which those accounts were frozen, provided that such interest, other earnings and payments continue to be subject to these measures and are frozen;

(e) For five years from the JCPOA Adoption Day or until the date on which the IAEA submits a report confirming the Broader Conclusion, whichever is earlier, take the necessary measures to prevent the entry into or transit through their territories of individuals described in paragraphs 6(c) above, although underlining that nothing in this paragraph shall oblige a State to refuse its own nationals entry into its territory. The measures imposed in this paragraph shall not apply when the Security Council determines on a case-by-case basis that such travel is justified on the grounds of humanitarian need, including religious obligations, or where the Security Council concludes that an exemption would otherwise further the objectives of the new resolution, including where Article XV of the IAEA statute is engaged;

(f) Take the required actions, in accordance with the resolution and guidance provided by the Security Council, with respect to items the supply, sale, transfer, or export of which is being undertaken contrary to the provisions contained in the JCPOA or this statement, and cooperate in such efforts.

7. All States are called upon to facilitate full implementation of the JCPOA by inspecting, in accordance with their national authorities and legislation and consistent with international law, in particular the law of the sea and relevant international civil aviation agreements, all cargo to and from Iran, in their territory, including seaports and airports, if the State concerned has information that provides reasonable grounds to believe that the cargo contains items the supply, sale, transfer, or export of which is being undertaken contrary to the provisions contained in the JCPOA or this statement; and are called upon also to cooperate in inspections on the high seas with the consent of the flag State, if there is information that provides reasonable grounds to believe the vessel is carrying items the supply, sale, transfer or export of which is being undertaken contrary to the provisions contained in the JCPOA or this statement.

China, France, Germany, the Russian Federation, the United Kingdom, the United States and the European Union note their understanding that, upon adoption of a resolution endorsing the JCPOA, the Security Council would make the practical arrangements to undertake directly the tasks specified in this statement, including to monitor and take action to support the implementation by Member States of these provisions, review proposals described in paragraph 2 of this statement, answer inquiries from Member States, provide guidance, and examine information regarding alleged actions inconsistent with the resolution. Furthermore, these states propose that the Security Council ask the Secretary-General to report to the Security Council on the implementation of these provisions every six months.

The duration of the provisions in this statement may be reviewed by the Joint Commission at the request of any participant at its biannual ministerial-level meetings, at which time the Joint Commission could make recommendations by consensus to the Security Council.

ATTACHMENT

1. AGHA-JANI, Dawood
2. ALAI, Amir Moayyed
3. ASGARPOUR, Behman
4. ASHIANI, Mohammad Fedai
5. ASHTIANI, Abbas Rezaee
6. ATOMIC ENERGY ORGANISATION OF IRAN (AEOI)
7. BAKHTIAR, Haleh
8. BEHZAD, Morteza
9. ESFAHAN NUCLEAR FUEL RESEARCH AND PRODUCTION CENTRE (NFRPC) AND ESFAHAN NUCLEAR TECHNOLOGY CENTRE (ENTC)
10. FIRST EAST EXPORT BANK, P.L.C.:
11. HOSSEINI, Seyyed Hussein
12. IRANO HIND SHIPPING COMPANY
13. IRISL BENELUX NV
14. JABBER IBN HAYAN
15. KARAJ NUCLEAR RESEARCH CENTRE
16. KAVOSHYAR COMPANY
17. LEILABADI, Ali Hajinia
18. MESBAH ENERGY COMPANY
19. MODERN INDUSTRIES TECHNIQUE COMPANY
20. MOHAJERANI, Hamid-Reza
21. MOHAMMADI, Jafar
22. MONAJEMI, Ehsan
23. NOBARI, Houshang
24. NOVIN ENERGY COMPANY
25. NUCLEAR RESEARCH CENTER FOR AGRICULTURE AND MEDICINE
26. PARS TRASH COMPANY
27. PISHGAM (PIONEER) ENERGY INDUSTRIES
28. QANNADI, Mohammad
29. RAHIMI, Amir
30. RAHIQI, Javad
31. RASHIDI, Abbas
32. SABET, M. Javad Karimi
33. SAFDARI, Seyed Jaber
34. SOLEYMANI, Ghasem
35. SOUTH SHIPPING LINE IRAN (SSL)
36. TAMAS COMPANY